

REGIONAL EMISSIONS ANALYSIS OF THE DRAFT TRANSPORTATION IMPROVEMENT PROGRAM AND REGIONAL TRANSPORTATION PLAN

April 1, 2005

OVERVIEW

On October 1, 2002, President Bush signed into law H.R. 3880 (P. L. 107-230), which states its intention to “provide a temporary waiver from certain transportation conformity requirements and metropolitan transportation planning requirements under the Clean Air Act and under other laws for certain areas in New York where the planning offices and resources have been destroyed by acts of terrorism, and for other purposes.” The purpose of this Waiver is to provide the State of New York temporary relief from certain Clean Air Act (CAA) requirements, commonly known as “transportation conformity” requirements, and related metropolitan planning provisions of Title 23 and Title 49 of the United States Code and the regulations promulgated there under. The Waiver is in place until September 30, 2005.

This relief period was provided so that the local Metropolitan Planning Organization (MPO) responsible for transportation planning in the New York Metropolitan Area (see Figure 1.) would be able to assess the impacts on the transportation network that resulted from the September 11, 2001 terrorist attacks, and implement necessary adjustments to the complicated transportation network/air quality planning computer models used to determine transportation conformity. During this time the local MPO, the New York Metropolitan Transportation Council (NYMTC), would also be relocated to new offices, seek to gather together as much existing documentation and records as possible from members to replace lost files and work efforts, and adjust staff as necessary, as a result of the loss of the NYMTC offices in the World Trade Center.

The Energy and Commerce Committee of the United States House of Representatives issued a committee report (H. Rpt. 107-649) with language relevant to several requirements to ensure progress in improving air quality in the region and to demonstrate how the region will be in conformity at the conclusion of the waiver period. These requirements and their associated milestone dates are:

- (a) *Not later than April 1, 2003, the collection and analysis of new travel surveys, along with new job, labor force, and household data to describe the revised travel and activity patterns in the New York Metropolitan area and support refined validation of the Best Practices Model (BPM) for the region.*
- (b) *Not later than February 1, 2004, the development of revisions to the NYBPM needed to replicate observed travel patterns in the New York Metropolitan area.*
- (c) *Not later than September 1, 2004, preliminary modeling analysis of motor vehicle emissions using the latest travel survey data, the revisions to the BPM, and the latest iteration of EPA’s Mobile model (Mobile 6) to demonstrate expected emissions of pollutants subject to the requirements of 40 CFR, Section 93.118 in 2005, 2007, 2015, and 2025, with applicable models and data available for independent public oversight.*
- (d) *Not later than April 1, 2005, the submission of the proposed regional transportation plan (Plan), Transportation Improvement Program (TIP) and emission analysis to the public for review and comment pursuant to 40 CFR Section 93.105.*
- (e) *Not later than October 1, 2005 the adoption of such additional measures as may be necessary to achieve the levels of motor vehicle emissions required by the emissions budgets contained in the applicable*

Public Law 107-230 (Waiver) Area of Applicability

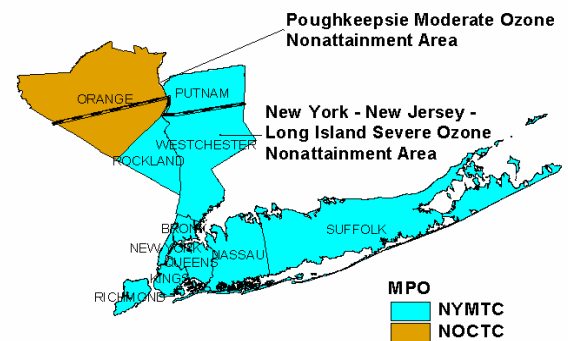


Figure 1

implementation plan no later than the year by which such budget is to be attained, and such additional measures as may be necessary to maintain the latest budget during the years following the budget."

This report is intended to partially fulfill the requirement for item (d) above, by summarizing the regional emissions analysis performed for NYMTC's draft Federal Fiscal Year (FFY) 2006-2020 TIP and draft FFY 2005-2030 Plan. The reader is referred to the *Interim Progress Report* completed in December 2003 and the *Preliminary Modeling Analysis* completed in September 2004 for additional information.

REGIONAL EMISSIONS ANALYSIS

The preparation of the Regional Emissions Analysis as required by the Waiver legislation involved a number of steps taken by NYMTC over the period of the Waiver in order to prepare its analytical capabilities to evaluate the emissions impacts of the updated Plan and TIP. These steps are outlined below:

I.A. Data Collection

Employer Dislocation Data Post 9/11

This task was completed with the publication of the final Technical Memorandum on December 5, 2002. See Appendix 1A for more information.

2002 Population and Employment Data

An updated population and employment database was developed for New York Best Practice Model (NYBPM) for the year 2002 at the Transportation Analysis Zone (TAZ) level.

In addition to employment and population data, NYBPM required other socioeconomic variables as input. The following additional variables were also produced for the 2002 base year:

- Household population,
- Group quarters population,
- Households,
- Average household size,
- Employed labor force,
- School enrollment: K-12,
- University enrollment,
- Basic employment,
- Non-basic employment,
- Office employment,
- Retail employment,
- Average earnings, and
- Aggregated earnings.

2002 Traffic Count Data

Post-September 11th traffic counts were collected at over 2,200 locations throughout the region, including major entry points to Lower and Midtown Manhattan, to establish new 2002 baseline vehicular travel conditions for the NYBPM. As part of this effort, NYMTC identified and compiled a set of traffic count databases and documents from various regional and sub-regional agencies. The appropriateness of each traffic count database or document, as well as the validity of the individual records were reviewed and incorporated into the 2002 BPM screenline database. In the case of locations that were not updated with new counts, growth factors were developed and applied to the 1997 database counts to project to 2002 levels.

The primary data sources compiled by NYMTC for the 2002 NYBPM screenline database update are listed in Appendix 1B.

2002 Transit Data

NYMTC staff collected and analyzed transit data from various sources for the NYBPM runs. These data included ridership data, schedule changes, and new services. Appendix 1C lists the data sources that NYMTC used for data collection.

I.B. Socioeconomic Forecasts

NYMTC had previously adopted socioeconomic forecasts for a 2025 horizon year in December. These forecasts have since been adjusted for the impacts of September 11th and extended by five years to 2030 for the update of the Regional Transportation Plan. The 2030 forecasts employed new macroeconomic assumptions, or drivers, at the national level in the form of U.S. employment, earnings, population and labor force forecasts from 2003 to 2027. The new drivers indicate that long-term growth will be considerably stronger than previously anticipated.

The 2030 forecasts were adopted into the draft Plan in September 2004. Besides the new drivers, adjustments included a re-benchmarking of demographic forecasts to the results of the 2000 Census, a reflection of the employment impacts of September 11th on job growth and distribution in the tri-state region, and an inventory of regionally-significant land use developments planned for the region. Please refer to Appendices 2A and 2B for employment and population forecast tables, respectively, and Appendix 2C for the development inventory.

I. C. Project Information

NYMTC staff reached out to all appropriate agencies to collect information for the improvement projects which appear in the draft FFY 2006-2010 TIP and the draft FFY 2005-2030 Plan that must be included in the Regional Emissions Analysis due to their classification as “non-exempt” projects. Relevant information was provided, such as scope of project, date of completion, and type of proposed projects by filling out electronic forms for each project category. For modeling purposes, all this information was then transferred into a single database. This database appears in Appendix 3.

I.D. Updated Model Base Year

The NYBPM is a network-based model that provides the base estimate of vehicles miles of travel (VMT) by on-road vehicles for the Regional Emissions Analysis. The NYBPM was originally developed with network data collected in 1997 and had to be updated so that the model network matched actual conditions for the 2002 base year of this Regional Emissions Analysis. Several steps were involved in the process, which are described below.

- **Network Updates**

The highway and the transit networks have been updated to match existing condition in the 2002 base year. Changes in capacities of the roadways and speed limits, addition of new lanes and ramps, and signal computerizations were incorporated into the highway networks. Transit route systems were revised to include new services including operational changes and changes in schedule.

- **Socioeconomic Inputs**

The socioeconomic variables that were input to the model were disaggregated to the transportation analysis zone (TAZ) level for the model runs.

- **Model Enhancements**

Several enhancements were incorporated in the New York best Practice Model (NYBPM) to get a more realistic result. The transit and highway networks that were independent in the previous version of the model were linked in the updated model so that the congested speeds on highway would take into account the bus flows as well. Algorithms were modified to get a better estimate of all the external trips that pass through the region. Mobile 6.2, EPA’s current emission model, was integrated with the post processor, *PPSuite*, to meet the Federal requirements for transportation conformity.

- **Calibration/Validation of the 2002 Base Year**

The model was run with revised socioeconomic data and modified networks for 2002. The traffic flows at screenline locations were compared with actual counts that were collected for the year 2002. Adjustment factors were applied where significant differences were observed and the model was rerun. After several such iterations of the model run, the resulting traffic flow was determined to be within acceptable range of the traffic count database. A similar process was undertaken to match the transit ridership projections with the observed ridership counts by route and at major transit terminals.

Appendix 4-A1 shows a comparison of traffic flows from the screenlines by three functional class groups with observed counts while Appendix 4-A2 presents a comparison of the NYMTC's Hub Bound Report counts and NYBPM output. The differences between model output and observed values are within acceptable range.

Appendix 4-A3 shows vehicle miles of travel by three functional class groups by county and Appendices 5-A1 and 5-A2 present results for transit validation where mode shares of transit trips to total person trips were reviewed by district of origin and by district of destination, respectively.

For more detail information on the calibration and validation process, please refer to Appendix 5-A3.

Future Year Model Runs

The NYBPM was run for six future scenario years – 2005, 2007, 2010, 2020, 2025, and 2030 in accordance with the draft 2006-2010 Transportation Improvement Program (TIP). The following steps were involved in the process:

- **Future Year Networks**

Highway networks were created for each future year. All projects that are scheduled for completion before a scenario year are coded into that scenario year. Similarly, transit networks were also created for each scenario year based on information provided by the transit agencies' future running schedules and operating plans.

- **Socioeconomic Forecasts**

The population and employment forecasts by county were adopted into the draft Plan by NYMTC's members. The fourteen socioeconomic forecast variables that are input to the model were disaggregated to Transportation Analysis Zones for each future scenario year.

- **NYBPM Model Output**

The model was run with corresponding socioeconomic forecasts and modified networks for each future year. The model produced traffic flows on assigned highway networks with congested speeds and vehicle miles of travel and transit ridership by route for the transit system.

Regional Emissions Analysis for Future Years

Post Processing – The NYBPM is a transportation demand model and as seen cannot provide the regional emissions estimates. To produce an emission analysis, the U.S. Environmental Protection Agency's Mobile 6.2 Model was used to generate vehicle emission factors (grams/miles) which are applied to the network generated vehicle miles of travel. A post processor known to as "PPSuite" was employed to link the NYBPM to the MOBILE 6.2 Model. First PPSuite reconciled the Highway Performance Monitoring System (HPMS) VMTs to the network based VMT. Then the PPSuite adjusted the NYBPM network speeds and processed the required inputs into a format compatible with MOBILE 6.2. Regional emissions were estimated at the end of the Mobile 6.2 run.

The NYBPM assignment outputs were applied as input to PPSuite for the future scenario years. The resulting preliminary emissions output are presented in Tables 1, 2, and 3. Table 1 presents the emission estimates in tons per day for VOC, NOX, and CO, for the base year 2002. Table 2 and Table 3 below

present the emission estimates in tons per day for VOC, NOX, and CO, for the future TIP and Plan scenario years.

Table 1- Emission Estimates for Base Year 2002

County	Emissions for 2002		
	VOC (tons/day)	NOX (tons/day)	CO (tons/day)
	Summer		Winter
New York	14.21	23.48	157.00
Queens	25.47	36.00	307.40
Kings	17.65	23.36	179.91
Bronx	11.37	19.57	148.31
Richmond	6.88	10.36	88.72
Subtotal NYC	75.58	112.78	881.34
Nassau	32.93	39.49	515.63
Suffolk	48.70	59.18	797.84
Westchester	26.00	47.32	388.62
Rockland	8.80	14.37	128.56
Putnam	6.16	13.94	102.06
Subtotal other counties	122.58	174.30	1932.71
TOTAL	198.16	287.08	2814.05

Table 2 – Emission Estimates for Future TIP and Plan Years in tons/day

County	Year 2005 TIP			Year 2007 TIP			Year 2010 Plan		
	Summer		Winter	Summer		Winter	Summer		Winter
	VOC (tons/day)	NOX (tons/day)	CO (tons/day)	VOC (tons/day)	NOX (tons/day)	CO (tons/day)	VOC (tons/day)	NOX (tons/day)	CO (tons/day)
New York	13.01	20.43	137.46	10.32	16.47	96.16	7.67	13.12	82.49
Queens	19.98	30.95	258.84	16.59	24.50	186.80	12.28	18.93	160.38
Kings	13.08	19.50	147.22	11.05	15.30	105.03	8.25	11.79	90.18
Bronx	9.20	16.92	126.47	7.36	13.35	89.55	5.57	10.38	77.45
Richmond	5.82	9.18	79.64	4.66	7.12	56.29	3.49	5.44	48.56
Subtotal NYC	61.08	96.99	749.63	49.98	76.74	533.82	37.25	59.66	459.07
Nassau	25.76	34.29	439.13	20.58	25.51	309.81	15.50	19.19	268.22
Suffolk	38.57	52.13	687.63	31.43	38.96	492.17	24.17	29.60	434.64
Westchester	21.22	42.01	339.91	17.07	33.09	241.28	13.16	25.72	211.79
Rockland	7.13	12.98	112.83	5.76	10.18	80.78	4.49	8.07	72.12
Putnam	4.67	12.30	88.45	3.96	10.37	63.82	3.13	8.42	55.43
Subtotal other counties	97.34	153.72	1667.94	78.81	118.09	1187.86	60.44	90.98	1042.20
TOTAL	158.42	250.70	2417.57	128.78	194.83	1721.68	97.70	150.64	1501.26

Table 3 – Emission Estimates for Future Plan Years in tons/day

County	Year 2020 Plan			Year 2025 Plan			Year 2030 Plan		
	Summer		Winter	Summer		Winter	Summer		Winter
	VOC (tons/day)	NOX (tons/day)	CO (tons/day)	VOC (tons/day)	NOX (tons/day)	CO (tons/day)	VOC (tons/day)	NOX (tons/day)	CO (tons/day)
New York	3.69	5.95	62.89	3.19	4.44	60.60	3.12	3.21	59.50
Queens	6.14	8.11	126.64	5.36	6.15	123.90	5.24	4.89	121.41
Kings	4.04	4.95	70.36	3.55	3.73	68.90	3.44	2.96	67.46
Bronx	2.87	4.28	62.11	2.55	3.19	61.69	2.57	2.57	61.46
Richmond	1.85	2.30	40.61	1.70	1.78	41.53	1.74	1.50	42.25
Subtotal NYC	18.58	25.60	362.62	16.34	19.29	356.62	16.11	15.13	352.08
Nassau	7.73	7.74	212.46	6.68	6.02	207.55	6.53	5.33	203.90
Suffolk	12.79	12.32	364.60	11.42	9.90	367.92	11.43	9.14	368.16
Westchester	7.00	10.16	175.32	6.25	7.51	176.68	6.51	6.58	180.61
Rockland	2.44	3.40	61.16	2.25	2.65	62.90	2.41	2.36	65.31
Putnam	1.82	3.51	45.48	1.63	2.49	47.42	1.77	2.00	49.70
Subtotal other counties	31.77	37.13	859.03	28.23	28.57	862.46	28.64	25.42	867.68
TOTAL	50.35	62.72	1221.65	44.57	47.86	1219.08	44.75	40.55	1219.76

A Comparison was done of the emissions produced from the model with the available SIP estimates for the volatile organic compound (VOC), nitrogen oxide (NOX), and carbon monoxide (CO). Please refer to Table 4 for a comparison of VOC and NOX summer emissions. The model emissions are below the SIP estimates for both VOC and NOX pollutants for the years 2005 and 2007.

Table 4

NYMTC Modeled Emissions Compared to SIP Emission Estimates

VOC and NOX Emissions For Summer

Emissions in Tons per Day	2005 Action TIP		2007 Action TIP	
	VOC	NOX	VOC	NOX
SIP Emission Estimates	163.00	246.00	176.30	227.80
NYMTC 9 Counties modeled emissions (excluding Putnam)	151.07	235.15	122.56	181.96
Putnam modeled emissions	4.67	12.30	3.96	10.37

Table 5 presents a comparison of CO emissions from the model and SIP estimates for the winter. Again in both cases the model emissions are below SIP estimates for the years 2007 and 2012.

Table 5

Comparison of Model and SIP estimates of CO Emissions for Winter

CO Emissions in tons/day	2007 TIP	2012 Plan
NYC 5 Counties	533.82	439.7794
Nassau County	309.81	257.0688
Westchester County	241.28	204.4956
Total NYMTC 7 counties	1084.906	901.3438
SIP Estimates	2,381	2,431

II. EMISSIONS CONTROL STRATEGIES

This Interim Progress Report presents information on the substantial commitment and progress the region has made in adopting and implementing strategies to reduce emissions from the transportation sector. As reported, the region has agreed to initiate Regional Commuter Choice, Enhanced Ozone Action Days, Regional Clean Fuels, and Regional Signal Timing and evaluate additional strategies for possible adoption. Since the Interim Progress Report the following progress has been made. With regard to the three adopted measures:

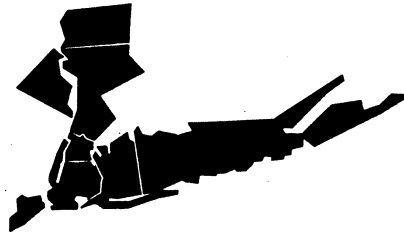
Regional Commuter Choice- NYMTC, in cooperation with USEPA, released the initial list of employers qualifying for the Metro NY-NJ-CT Best Workplaces for CommutersSM status in June 2004. This program recognizes corporations that have taken a leadership position by incorporating innovative commuter benefits for employees in accordance with the EPA’s National Standard of Excellence, thereby earning the designation of Best Workplaces for Commuters. A common list of specific implementation actions, known as the Integrated Service Delivery Program has been put together and adopted by each of the three NYMTC sub-regions. Funding for this is in the process of being formalized. The development of a regional branding concept to integrate all aspects of Regional Commuter Choice to provide a unifying common marketing strategy across the region is being developed.

Enhanced Ozone Action Days – This enhanced program will provide alerts for travelers within New York, New Jersey and Connecticut, encouraging them to reduce auto usage on days when ozone levels are forecast to be at high levels.

Regional Clean Fuels – A consortium is being established to coordinate with various agencies and fleet managers, to develop and maintain a database of fleet inventories, identify and support opportunities for emissions reduction pilot programs and synergies, match emissions control technologies with fleets, and coordinate ongoing programs for fleet manager technical support and the implementation of new fuel technologies.

Regional Signal Timing – Based on inventories of traffic signals throughout the region, traffic corridors are being identified and prioritized to improve traffic progression at signalized intersections through retiming and eventual computerization and interconnection of signals to reduce congestion by improving traffic flow.

Revised 3/31/05



**New York
Metropolitan
Transportation
Council**

The Metropolitan Planning Organization

Demographic and Socioeconomic Forecasting

*Post September 11th Impacts
Technical Memorandum*

*Tasks 3.1 & 3.2
Inventory of Affected Businesses;
Telephone and Mail Surveys of Affected Businesses:
Their Characteristics and Aftermath*

*Submitted by:
Urbanomics
September 10, 2002*

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NEW YORK METROPOLITAN TRANSPORTATION COUNCIL

DEMOGRAPHIC AND SOCIOECONOMIC
FORECASTING
POST SEPTEMBER 11TH IMPACTS

TECHNICAL MEMORANDA 3.1 & 3.2
INVENTORY OF AFFECTED BUSINESSES;
TELEPHONE AND EMAIL SURVEYS OF AFFECTED BUSINESSES:
THEIR CHARACTERISTICS AND AFTERMATH

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PRIME CONSULTANT:

URBANOMICS
115 5TH AVENUE
3RD FLOOR
NEW YORK, NEW YORK 10003

**TECHNICAL MEMORANDA 3.1 & 3.2:
INVENTORY OF AFFECTED BUSINESSES;
TELEPHONE AND EMAIL SURVEYS OF AFFECTED BUSINESSES:
THEIR CHARACTERISTICS AND AFTERMATH**

TABLE OF CONTENTS

1.1 Introduction	1
1.2 Inventory of Affected Businesses	2
1.3 Summary of Findings	6
1.4 Next Steps	7
1.5 Work Products	8

TABLES

1. Data Sources
2. Survey Respondents by Industry
3. The Inventory of Destroyed and Damaged Buildings: Square Footage and Employment by Building
4. Total Square Footage and Employment in Damaged and Destroyed Buildings by Industry, prior to 9/11
5. Total Square Footage and Employment in Damaged and Destroyed Buildings by SIC/NAICS Code, prior to 9/11
6. Losses from Lower Manhattan by Industry, pre- and post-9/11
7. Losses from Lower Manhattan by SIC/NAICS Code, pre- and post-9/11
8. Comparison Table by Industry of Square Footage and Employment from Damaged and Destroyed Buildings pre-9/11 and from Lower Manhattan post-9/11
9. Relocations since 9/11 by Square Footage and Employment

CHARTS

1. Establishments Represented in Damaged and Destroyed Buildings, prior to 9/11
2. Total Square Footage and Employment in Damaged and Destroyed Buildings, prior to 9/11

3. Net Employment Losses from Lower Manhattan due to Destroyed and Damaged Buildings post-9/11
4. Relocations since 9/11

MAPS

1. Buildings Damaged and Destroyed as a Result of 9/11
2. Thirty-One County New York Metropolitan Region
3. Real Estate Neighborhood Divisions
4. Lower Manhattan: Relocated Employment
5. Upper Manhattan: Relocated Employment
6. Outer Boroughs: Relocated Employment
7. Other New York Relocations
8. Regional New Jersey and Connecticut: Relocated Employment

TENANT INVENTORY TABLES

1. 1 World Trade Center – North Tower
2. 2 World Trade Center – South Tower
3. 3 World Trade Center
4. 4 World Trade Center – Commodities Exchange Center
5. 5 World Trade Center – Northeast Plaza
6. 6 World Trade Center – U.S. Customs House
7. 7 World Trade Center
8. 1 World Financial Center
9. 2 World Financial Center
10. 3 World Financial Center
11. 4 World Financial Center
12. Winter Garden
13. 101 Barclay Street
14. 111 Broadway
15. 115 Broadway
16. 140 Broadway
17. 130 Cedar Street
18. 90 Church Street
19. 99 Church Street
20. 100 Church Street
21. 22 Cortlandt Street

22. 24-26 Cortlandt Street
23. 106 Liberty Street
24. 110 Liberty Street
25. 114 Liberty Street
26. 1 Liberty Plaza
27. 130 Liberty Plaza
28. 75 Park Place
29. 90 West Street
30. 140 West Street
31. 30 West Broadway

**TECHNICAL MEMORANDA 3.1 & 3.2:
INVENTORY OF AFFECTED BUSINESSES;
TELEPHONE AND EMAIL SURVEYS OF AFFECTED BUSINESSES:
THEIR CHARACTERISTICS AND AFTERMATH**

1.1 INTRODUCTION

The destruction of more than 14 million square feet of office and other commercial floor space at the World Trade Center (WTC) and the immediate loss of 114,100 jobs from the destroyed and damaged buildings of the WTC, the World Financial Center (WFC) and the rest of the frozen zone (Map 1), have significantly altered the distribution of employment, occupied floor space, and work trip destinations in New York City and the Region. According to the New York State Department of Labor (NYS DOL), the City's unemployment levels have surged to nearly 8% in response to the direct 9/11 losses, the subsequent loss of business, and recession-related effects.¹ Since September 2001, total payroll employment in New York City declined by 49,700 jobs, or 1.4%, from 3,681,700 to 3,632,000, by June 2002. In total, 57,100 jobs left Lower Manhattan, though most of these remained in New York City (Table 6).

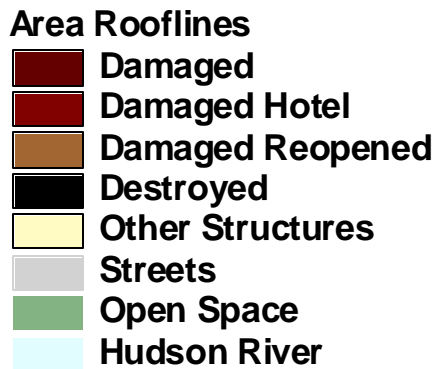
Aside from short term disruptions, the events of September 11th are expected to have long term implications for the pattern of work trip origin and destination. Companies that have found space outside Manhattan may never return, while those that are temporarily housed in New Jersey, Long Island, Connecticut or Westchester may choose to relocate to suburban locations when their leases expire. Security concerns are also likely to propel publicly-traded companies (whether or not they were directly affected) to seek lower density work sites over the next few years.

This research inventories the firms located in the destroyed and damaged buildings of the WTC, the WFC, and the surrounding area of collateral damage. It draws from a variety of sources to present a picture of the locational decisions made by these firms after the attacks on September 11th, 2001. It does not address employment lost elsewhere in Lower Manhattan or New York City that resulted from the loss of businesses following the disaster.

¹ It should be noted that the full employment impact may not be evident in reported payroll employment and earnings data for some time to come. Temporarily relocated employees may still be reported from a New York City address, layoffs may be carried on payrolls until their benefits expire, and more workers may be telecommuting from home or working on a part-time basis.



Map 1. Buildings Damaged and Destroyed as a Result of 9/11



1.2 INVENTORY OF AFFECTED BUSINESSES

Content

This inventory consists of businesses that lost space in the World Trade Center and adjacent properties destroyed and damaged on September 11th. It reflects conditions as of July 2002, and includes data on all businesses for which relocation information is known. Businesses for which relocation data are not available appear in the tabulations by Industry and SIC/NAICS code as “Unknown” (Tables 4-9).

Data Sources

This inventory has been compiled from lists prepared by the New York City Economic Development Corporation (NYC EDC) and the New York State Empire State Development Corporation (NYS ESDC), the Real Estate Board of New York (REBNY), the New York Department of Labor (NY DOL), and the City University of New York (CUNY). In addition, the websites of CoStar, TenantWise, CNN, newspapers, and real estate brokerage companies have been consulted as well as the websites of firms located within the affected area (Table 1).

Of these sources, the government lists, particularly NYC EDC’s and NYS ESDC’s *ReStart Central*, and the websites of affected firms have provided the most exhaustive relocation data, while TenantWise, newspapers, trade journals, and brokerage companies have focused on large-space users to the exclusion of smaller firms.

In addition to these data sources, telephone and email surveys were conducted of all firms located in the destroyed or damaged buildings, whenever a telephone number or email address was known. Although not a representative sampling of firms, these surveys achieved a high response rate from industries with large concentrations of firms in the affected buildings. For example, 22.2% of establishments in the finance industry contacted, representing 16.4% of total finance firms in the destroyed and damaged buildings, provided data. 2 or 66.7% of hospitality firms responded to our survey, as did 47.4% of construction and engineering firms and approximately a third of accounting, architecture and design, computer services, consulting, government, insurance, publishing, and technology firms. Moreover, nearly a quarter of business services, law, manufacturing, personal services, real estate, and retail and wholesale companies answered our surveys, while low response rates were obtained for the remaining industries, most notably Education, Health Care and Travel Agencies. In total, the surveys, primarily the telephone interviews, obtained over 230 responses (see Table 2).

Description of Tables, Charts, Maps, and Tenant Inventory Tables

Table 1

As described in Section 1.2 "Data Sources", Table 1 outlines the sources of data employed in compiling the Tenant Inventory Tables. It includes contact information, as well as the type and date of data collected.

Table 2

The number of establishments which responded to the telephone and email surveys is listed by industry in Table 2. Further, this number is shown as a percentage both of total respondents and of total establishments from each industry located in the destroyed or damaged buildings.

Table 3

Table 3 lists the buildings destroyed or damaged by the attack, with their square footage and employment prior to 9/11.

Table 4

Reflecting the information provided in Table 3, Table 4 breaks down the square footage and employment of the damaged and destroyed buildings by industry. The number of firms or establishments within each industry is listed and shown as a percentage of the total establishments.

Table 5

Table 5 reiterates the data provided in Table 4, though by SIC and NAICS Codes in addition to Industry headings.²

Table 6

Table 6 provides an industry breakdown of establishments previously located in the destroyed and damaged buildings, which left Lower Manhattan after 9/11. It shows the number of establishments lost by industry, this number as a percentage of the total establishments lost, and their square footage and employment as of September 10, 2001. This data is coupled with their square footage and employment post-9/11 in any number of new locations outside of Lower Manhattan.

² The NAICS system, together with the SIC system, which it replaced, have been developed by the U.S., Canada, and Mexico to enable statistical comparisons to be drawn among businesses across North America.

Table 7

Table 7 reiterates the data provided in Table 6, though by SIC and NAICS Codes in addition to Industry headings.

Table 8

Unlike Tables 6 and 7, Table 8 focuses on firms, previously sited in the destroyed and damaged buildings, which returned to Lower Manhattan after 9/11. It provides information, by Industry, on the number of establishments, square footage, and employment present on September 10, 2001, which corresponds to data shown in Table 4. To this information is added the number of establishments, square footage and employment that returned to Lower Manhattan as a whole between September 12, 2001 and July 2002 (the latter two correspond to data in Table 9).³ The third set of numbers, described as "Absolute change," reflects the number of establishments lost from Lower Manhattan (shown on Table 5), while the square footage and employment numbers show the absolute difference – or loss – to Lower Manhattan resulting from the change in pre-and-post 9/11 levels.

Table 9

Table 9 catalogues the relocation decisions made by establishments previously located in the destroyed and damaged buildings. Broken down by destination, establishments are shown by their square footage and employment, both prior to and post-9/11. As some establishments assumed multiple new locations, the number of destinations exceeds the number of establishments shown in Tables 4, 5 and 8.

Charts 1-4

Charts 1 and 2 provide graphic depictions of the information contained in Tables 4 and 5, while Chart 3 reflects Tables 6 and 7, and Chart 4 illustrates the relocations of employment outlined in Table 9.

Maps 1-8

Map 1 depicts the buildings damaged or destroyed on September 11th, while Map 2 illustrates the 31 county region served by NYMTC. Map 3 delineates the Manhattan destinations referenced in Section 1.3 "Summary of Findings" and the Tenant Inventory Tables. The relocation decisions and employment of establishments previously located in the destroyed and damaged buildings are shown on Maps 4-8, with regard to Lower Manhattan (Map 4), Upper Manhattan (Map 5), New York's outer boroughs (Map 6), elsewhere in New York State (Map 7), and New Jersey and Connecticut (Map 8).

³ The 311 establishments post-9/11 had 11 additional destinations in Lower Manhattan.

Tenant Inventory Tables 1-31

Tenant Inventory Tables 1-31 list the establishments present in the destroyed and damaged buildings as of September 10th, 2001. They include each company's name, street address, website address, email address, square feet owned or leased, and employment. These data are coupled with relocation information, comprising each company's current address, square feet owned or leased, employment, and telephone and fax numbers, as well as the status of their current location, i.e. whether temporary or permanent. Companies that have been shuttered for lack of business after September 11th are also identified, when known. Moreover, whenever possible, a distinction is made in company losses between victims and unemployed workers.

Table 1. Data Sources

DATA SOURCE	CONTACT INFORMATION	CONTACT PERSON	DATA COLLECTED	DATE
Cable Network News (CNN)	www.cnn.com	none	relocation data through articles	various
City University of New York (CUNY)	Queens College, City University of New York, 65-30 Kissena Blvd., Flushing, NY 11367; www.qc.com , www.cuny.edu	John Seley: tel (718) 997-5141; jseley@email.qc.cuny.edu	relocation data for non-profits	1/17/2002
CoStar Group	369 Lexington Avenue, 12th floor, New York, NY 10017; tel (917) 332-2100, fax (212) 681-0744; www.costar.com	none	list of tenants and relocation data through articles	various
Crains New York	www.crainsny.com	none	list of tenants and relocation data through articles, Rebuilding Business Directory, and Small Business Support Directory	various
Cushman Wakefield	51 West 52nd Street, New York, NY 10019, tel (212) 841-7500, fax (212) 841-7767; www.cushmanwakefield.com	none	relocation data through articles	various
Downtown Alliance	120 Broadway, Suite 3340, New York, NY 10271; tel (212) 566-6700, fax (212) 566-6707	Shirley Jaffe: sjaffe@downtownny.com	telephone survey of affected firms	6/17/2002
Grubb & Ellis	55 East 59th Street, 11th floor, New York, NY 10022; tel (212) 759-9700, fax (212) 326-4802; www.grubb-ellis.com	none	relocation data through articles and map of damaged and destroyed properties	various
Lawyers Diary and Manual	P.O. Box 50, 240 Mulberry Street, Newark, NJ 07101; tel (800) 444-4041, fax (973) 642-4280; www.law411.com	none	relocation data for lawyers	various
Newsday	www.newsday.com	none	relocation data through articles	various
New York City Economic Development Corporation (NYC EDC)	110 William Street, New York, NY 10038; tel (212) 312-3600 and (888) NYC-0100; www.newyorkbiz.com	Rachel Hitch, Senior Project Manager: tel (212) 312-3768, fax (212) 618-8898; rhitch@nycedc.com	<i>ReStart Central</i> data base	1/23/02, 1/31/02 and 2/14/02

Table 1 Continued. Data Sources

DATA SOURCE	CONTACT INFORMATION	CONTACT PERSON	DATA COLLECTED	DATE
New York City Human Resources Administration	tel (718) 291-1900; www.ci.nyc.ny.us/hra	Philippa L. Karteron, Administrator - Special Projects: karteronp@hra.nyc.gov	relocation data	1/23/2002
New York Daily News	www.nydailynews.com	none	relocation data through articles	various
New York State Department of Labor (NYS DOL)	Research and Statistics Division, P.O. Box 669, Mail Stop 8D, New York, NY 10014; tel (212) 352-6705; www.labor.state.ny.us	James Brown: usajpd@labor.state.ny.us ; Bohdan Wynnnyk: bwynnnyk@labor.state.ny.us	<i>ReStart Central</i> data base	1/23/02 and 3/11/02
New York State Empire State Development Corporation (NYS ESDC)	633 Third Avenue, New York, NY 10017; tel (800) 782-8369; www.empire.state.ny.us	Leonard Gaines: 30 South Pearl Street, Albany, NY 12245; tel (518) 292-5300; fax (518) 292-5806; lgaines@empire.state.ny.us	relocation data base	1/23/2002
NJ Transit	1 Penn Plaza East, Newark, NJ 07105; www.njtransit.com	Tom Marchwinski: cplntwm@njtransit.com	data on New Jersey relocations	2/1/2002
Tenantwise	67 Wall Street, 8th floor, New York, NY 10005; tel (212) 943-0077, fax (212) 943-2735; www.tenantwise.com	none	relocation data base and map of damaged and destroyed properties	various
The New York Times	www.nytimes.com	none	relocation data through articles	various
The North Jersey Transportation Planning Authority, Inc. (NJTPA)	1 Newark Center, 17th floor, Newark, NJ 07102; tel (973) 639-8400, fax (973) 639-1953; www.njtpa.org	Chad E. McCauley: mccauley@njtpa.org	data on New Jersey relocations	1/23/2002
The Real Estate Board of New York (REBNY)	570 Lexington Avenue, New York, NY 10022; tel (212) 616-5208, fax (212) 481-0420; www.rebny.com	Marilyn Davenport: mdavenport@rebny.com	relocation data base	1/31/02 and 2/11/02
The Wall Street Journal	www.wsj.com	none	relocation data through articles	various
The Washington Post	www.washingtonpost.com	none	list of tenants and contact information	various
Trammel Crow Company	2001 Ross Avenue, Suite 3400, Dallas, TX 75201; tel (214) 863-3000, fax (214) 863-3138; www.trammelcrow.com	none	relocation data through articles	various
Westchester County Office of Economic Development	www.co.westchester.ny.us	Sal Carrera, Director: tel (914) 995-2963; sjc3@westchestergov.com	data on Westchester relocations	1/24/2002

Table 2. Survey Respondents by Industry

Industry	Number of Firms	% of Total Respondents	% of Total Tenants
Accounting	4	1.7%	36.4%
Architecture/Design	4	1.7%	33.3%
Business Services	20	8.5%	23.8%
Communications	4	1.7%	13.8%
Computer Services	20	8.5%	31.3%
Concessions/Restaurant	6	2.6%	15.8%
Construction/Engineering	9	3.8%	47.4%
Consulting	6	2.6%	30.0%
Education	0	0.0%	0.0%
Government	9	3.8%	32.1%
Health Care	0	0.0%	0.0%
Hospitality	2	0.9%	66.7%
Insurance	19	8.1%	35.8%
Investments/Finance	52	22.2%	16.4%
Law	24	10.3%	24.0%
Manufacturing	2	0.9%	25.0%
Non-profit	3	1.3%	15.0%
Personal Services	11	4.7%	22.9%
Publishing	3	1.3%	33.3%
Real Estate	2	0.9%	25.0%
Retail/Wholesale	18	7.7%	28.1%
Technology	5	2.1%	35.7%
Transportation	3	1.3%	10.7%
Travel Agency	0	0.0%	0.0%
Unknown	8	3.4%	6.0%
Total	234	100.0%	20.6%

Source: Urbanomics, based on multiple sources identified in 1.2

1.3 SUMMARY OF FINDINGS

Overview

The buildings destroyed and damaged by the attacks of September 11th accounted for over 35 million square feet of commercial space and 114,100 jobs in Lower Manhattan. While over 14 million square feet, housing nearly 48,100 jobs, were destroyed, the remaining 21 million square feet was damaged, accounting for some 66,000 jobs (Table 3 and Chart 2). 1,134 firms were immediately displaced from the destroyed and damaged space and their relocation decisions resulted in an estimated 1,203 destinations, with several large firms split among three or four sites. Prior to September 11th, the greatest concentrations of firms and jobs located in these buildings were drawn from finance (representing 28.0% of the firms, 18.9 million square feet of floor space, and 63,300 jobs), insurance (4.7% of firms, 2.8 million square feet of floor space and 10,100 jobs), business and computer services (13.1% with 2.1 million square feet and 7,400 jobs), law (8.8% with 1.6 million square feet and 4,500 jobs), and retail/wholesale (5.6% of firms). Other large space users in the WTC, the WFC and the surrounding area include government agencies (3.2 million square feet), communications firms like Verizon (1.6 million square feet), and hospitality companies like Marriott and Hilton (936,000 square feet).

Fifteen additional industries numbered among the represented establishments, accounting for between 0.2% and 4.2% of the total, while almost 12% of the firms located within the WTC, the WFC, and surrounding buildings cannot be classified by industry or SIC (Standard Industry Classification)/NAICS (North American Industry Classification System) code (Tables 4-5 and Chart 1).

After September 11th, 311 firms remained or returned to Lower Manhattan at 322 destinations. Their pre- 9/11 employment of 57,100 workers in 19.2 million square feet of space comprised 50 percent of the immediate displacement. Post-9/11, the firms that returned to Lower Manhattan reported marginally fewer employees, 53,500, in a comparable amount of floor space (18.7 million square feet) (Table 9).

In Lower Manhattan	Pre 9/11	Post 9/11
Establishments	1,134	311 at 322 destinations
Employment	114,124	53,469
Square Feet of Floor Space	35,363,214	18,722,700

Source: Urbanomics, based on multiple sources identified in 1.2

Of the firms that left Lower Manhattan after September 11th 2001, the immediate loss of 57,100 jobs swelled to over 60,900 as workers were reassigned from other sites or newly hired. The majority of firms that did not return to Lower Manhattan number among financial, business services, law, trade, and computer service firms (Table 7). However, due to the retention of some major financial service firms, like American Express and Merrill Lynch, in Lower Manhattan, the 225 or 71 percent of financial companies that left the area only accounted for a loss of 40 percent of their industry's pre-9/11 floor space and 47 percent of their employment.

Post 9/11, of the 823 firms that left Lower Manhattan and resettled in 881 locations, over 192 moved to Midtown, 96 to Manhattan's Valley, and 21 to elsewhere in Manhattan, for a total of 309 Manhattan destinations above Lower Manhattan. The other boroughs saw some migration, particularly Long Island City in Queens (58 firms) and Downtown Brooklyn (34 firms). In total post 9/11, New York City retained some 811 of the 1,203 displaced firms with 81 percent of their employment (92,100 jobs). These firms occupied 30.5 million square feet of space equal to 86 percent of the destroyed and damaged floor area (Table 9 and Maps 4-7).

Outside of New York City, New Jersey attracted 103 firms with a pre-9/11 occupancy of 1.1 million square feet and employment of 4,700 (Table 9 and Map 8). Though both surged after the tragedy (to 3.3 million square feet and 11,700 jobs), the majority represent back office and other multiple locations of major firms, and additional hires, planned prior to 9/11. While less space was leased after September 11th by the 11 firms that moved to Westchester (800,000 square feet compared to 1.0 million square feet prior to 9/11), firms that relocated to Connecticut (11 in total), Long Island (25) and elsewhere in the United States (31) increased both their space leased and their employment. Moreover, of the tenants in the WTC and neighboring buildings, 207 firms went of business, moved outside of the US, or have not disclosed their relocation information. These accounted for pre-9/11 totals of 2.3 million square feet and 7,400 jobs.

1.4 NEXT STEPS

The inventory will be employed in establishing a year-end 2001 baseline of employment and floor space estimates by county and traffic analysis zone (TAZ), where appropriate, for New York City and the surrounding Region. The long term forecast of development trends in the Region will be adjusted to reflect changes in the 2001 baseline condition. The new baseline will be used in simulations of the Best Practice Model (BPM) and the Land Use Model (LUM) for evaluation of impacts on travel demand generation. It will also establish the basis for rebenchmarking the cross-accepted employment forecasts required by the Regional Transportation Plan (RTP).

1.5 WORK PRODUCTS

The text of this memo is contained in a Microsoft Word 97 for Windows file entitled "TM 3.1-3.2.doc." The tables and charts are contained in a Microsoft Excel 97 for Windows file called "TM 3.1-3.2.xls." Within this file, worksheet tabs identify each table by table number and each chart by chart number. The inventory files also appear in a Microsoft Excel 97 for Windows file entitled "TM 3.1-3.2 - Inventory," where each building appears on a single worksheet. The Maps are included as individual bitmap images named by map number.

Table 3. The Inventory of Destroyed and Damaged Buildings: Square Footage and Employment by Building

Building	Square Footage	Employment
Destroyed Buildings:		
WTC 1	4,761,416	19,175
WTC 2	4,761,416	14,997
WTC 3	584,600	1,249
WTC 4	576,000	1,861
WTC 5	783,520	3,639
WTC 6	537,693	1,913
WTC 7	2,000,000	5,245
Total Destroyed	14,004,645	48,079
Damaged Buildings:		
WFC 1	1,461,365	5,322
WFC 2	2,591,244	6,587
WFC 3	2,300,000	10,451
WFC 4	2,083,555	4,582
Winter Garden	95,466	344
101 Barclay Street	1,226,000	4,414
111 Broadway	418,000	1,496
115 Broadway	399,000	1,422
140 Broadway	1,200,000	2,990
130 Cedar Street	135,000	485
90 Church Street	950,000	3,512
99 Church Street	336,000	383
100 Church Street	1,032,539	3,210
22 Cortlandt Street	668,110	3,037
24-26 Cortlandt Street	380,052	950
106 Liberty Street	18,000	64
110 Liberty Street	6,000	21
114 Liberty Street	69,000	246
1 Liberty Plaza	2,124,447	6,072
130 Liberty Plaza	1,415,086	5,051
75 Park Place	547,165	2,224
90 West Street	350,000	1,220
140 West Street	1,171,540	1,741
30 West Broadway	381,000	221
Total Damaged	21,358,569	66,045
Total Damaged and Destroyed	35,363,214	114,124

Source: Urbanomics, based on multiple sources identified in 1.2

Table 4. Total Square Footage and Employment in Damaged and Destroyed Buildings by Industry, prior to 9/11

Industry	No. of Establishments	% of Total Establishments	Square Footage	Employment
Accounting	11	0.97%	40,239	143
Architecture/Design	12	1.06%	95,755	319
Business Services	84	7.41%	1,186,037	4,141
Communications	29	2.56%	1,631,526	3,211
Computer Services	64	5.64%	868,993	3,258
Concessions/Restaurant	38	3.35%	296,709	1,218
Construction/Engineering	19	1.68%	190,826	745
Consulting	20	1.76%	622,884	1,314
Education	2	0.18%	400,583	295
Government	28	2.47%	3,204,760	10,983
Health Care	17	1.50%	45,201	162
Hospitality	3	0.26%	935,945	2,096
Insurance	53	4.67%	2,803,920	10,095
Investments/Finance	318	28.04%	18,886,932	63,290
Law	100	8.82%	1,641,055	4,516
Manufacturing	8	0.71%	25,249	92
Non-profit	20	1.76%	343,385	1,267
Personal Services	48	4.23%	262,839	694
Publishing	9	0.79%	417,249	673
Real Estate	8	0.71%	37,493	118
Retail/Wholesale	64	5.64%	467,240	2,146
Technology	14	1.23%	73,565	279
Transportation	28	2.47%	242,968	750
Travel Agency	4	0.35%	14,134	50
Unknown	133	11.73%	627,729	2,267
Total	1,134	100.00%	35,363,214	114,124

Source: Urbanomics, based on multiple sources identified in 1.2

Table 5. Total Square Footage and Employment in Damaged and Destroyed Buildings by SIC/NAICS Code, prior to 9/11

SIC Code	NAICS Code	Industry	No. of Establishments	% of Total Establishments	Square Footage	Employment
20-39	311-339, 511	Manufacturing, Publishing, Technology	31	2.7%	516,063	1,044
41-47	481-488, 561	Transportation, Travel Agency	32	2.8%	257,102	800
48	513	Communications	29	2.6%	1,631,526	3,211
50-59	421/453, 722	Concessions/Restaurant, Retail/Wholesale	102	9.0%	763,949	3,365
60-62/67	521-523, 525, 551	Investments/Finance	318	28.0%	18,886,932	63,290
63-64	524	Insurance	53	4.7%	2,803,920	10,095
65	531	Real Estate	8	0.7%	37,493	118
70	721	Hospitality	3	0.3%	935,945	2,096
72	812	Personal Services	48	4.2%	262,839	694
73	514/541	Business and Computer Services	148	13.1%	2,055,030	7,399
80	621	Health Care	17	1.5%	45,201	162
81	541	Law	100	8.8%	1,641,055	4,516
82	611	Education	2	0.2%	400,583	295
86	813	Non-profit	20	1.8%	343,385	1,267
87	541	Accounting, Design, Construction/Engineering, Consulting	62	5.5%	949,704	2,521
91-97	921-928	Government	28	2.5%	3,204,760	10,983
99	999	Unknown	133	11.7%	627,729	2,267
Total	Total		1,134	100.00%	35,363,214	114,124

Source: Urbanomics, based on multiple sources identified in 1.2

Table 6. Losses from Lower Manhattan by Industry, pre- and post-9/11

Industry	No. of Establishments	% of Total Establishments	Square Footage pre-9/11	Employment pre-9/11	Square Footage post-9/11	Employment post-9/11
Accounting	6	0.7%	14,118	49	10,756	37
Architecture/Design	7	0.9%	57,665	240	52,984	234
Business Services	58	7.0%	518,507	1,817	612,004	2,165
Communications	26	3.2%	300,527	1,056	286,063	999
Computer Services	45	5.5%	514,812	1,855	519,145	1,599
Concessions/Restaurant	19	2.3%	171,033	769	167,537	754
Construction/Engineering	15	1.8%	153,896	586	143,843	525
Consulting	17	2.1%	52,772	170	36,151	115
Education	0	0.0%	0	0	0	0
Government	19	2.3%	1,623,525	5,902	2,284,915	7,558
Health Care	11	1.3%	31,910	115	64,110	230
Hospitality	2	0.2%	555,893	1,146	8,971	32
Insurance	33	4.0%	2,137,308	8,037	2,310,525	7,683
Investments/Finance	225	27.3%	7,537,040	27,093	9,176,775	30,368
Law	57	6.9%	989,647	3,024	988,356	3,310
Manufacturing	8	1.0%	25,249	92	20,386	73
Non-profit	15	1.8%	111,470	397	107,014	382
Personal Services	39	4.7%	228,863	570	287,112	797
Publishing	5	0.6%	32,120	115	23,634	84
Real Estate	5	0.6%	26,427	83	25,026	77
Retail/Wholesale	52	6.3%	228,063	820	224,630	757
Technology	13	1.6%	71,765	269	71,596	257
Transportation	25	3.0%	225,911	689	223,884	623
Travel Agency	3	0.4%	3,494	12	3,494	12
Unknown	118	14.3%	610,546	2,205	627,322	2,229
Total	823	100.0%	16,222,561	57,111	18,276,232	60,901

Source: Urbanomics, based on multiple sources identified in 1.2

Note: Post 9/11 square footage and employment are underreported because of "Unknown" destinations.

The 823 establishments that left Lower Manhattan had 881 multiple destinations.

Table 7. Losses from Lower Manhattan by SIC/NAICS Code, pre- and post-9/11

SIC Code	NAICS Code	Industry	No. of Establishments	% of Total Establishments	Square Footage pre-9/11
20-39	311-339, 511	Manufacturing, Publishing, Technology	26	3.2%	129,134
41-47	481-488, 561	Transportation, Travel Agency	28	3.4%	229,405
48	513	Communications	26	3.2%	300,527
50-59	421/453, 722	Concessions/Restaurant, Retail/Wholesale	71	8.6%	399,096
60-62/67	521-523, 525, 551	Investments/Finance	225	27.3%	7,537,040
63-64	524	Insurance	33	4.0%	2,137,308
65	531	Real Estate	5	0.6%	26,427
70	721	Hospitality	2	0.2%	555,893
72	812	Personal Services	39	4.7%	228,863
73	514/541	Business and Computer Services	103	12.5%	1,033,319
80	621	Health Care	11	1.3%	31,910
81	541	Law	57	6.9%	989,647
82	611	Education	0	0.0%	0
86	813	Non-profit	15	1.8%	111,470
87	541	Accounting, Design, Construction/Engineering, Consulting	45	5.5%	278,451
91-97	921-928	Government	19	2.3%	1,623,525
99	999	Unknown	118	14.3%	610,546
Total			823	100.0%	16,222,561

Source: Urbanomics, based on multiple sources identified in 1.2

Note: Post 9/11 square footage and employment are underreported because of "Unknown" destinations.

The 823 establishments that left Lower Manhattan had 881 multiple destinations.

Table 7 Continued. Losses from Lower Manhattan by SIC/NAICS Code, pre- and post-9/11

SIC Code	NAICS Code	Industry	Employment pre-9/11	Square Footage post-9/11	Employment post-9/11
20-39	311-339, 511	Manufacturing, Publishing, Technology	476	115,616	414
41-47	481-488, 561	Transportation, Travel Agency	701	227,377	636
48	513	Communications	1,056	286,063	999
50-59	421/453, 722	Concessions/Restaurant, Retail/Wholesale	1,588	392,167	1,511
60-62/67	521-523, 525, 551	Investments/Finance	27,093	9,176,775	30,368
63-64	524	Insurance	8,037	2,310,525	7,683
65	531	Real Estate	83	25,026	77
70	721	Hospitality	1,146	8,971	32
72	812	Personal Services	570	287,112	797
73	514/541	Business and Computer Services	3,671	1,131,149	3,764
80	621	Health Care	115	64,110	230
81	541	Law	3,024	988,356	3,310
82	611	Education	0	0	0
86	813	Non-profit	397	107,014	382
87	541	Accounting, Design, Construction/Engineering, Consulting	1,045	243,734	912
91-97	921-928	Government	5,902	2,284,915	7,558
99	999	Unknown	2,205	627,322	2,229
Total			57,111	18,276,232	60,901

Note: Post 9/11 square footage and employment are underreported because of "Unknown" destinations. The 823 establishments that left Lower Manhattan had 881 multiple destinations.

Table 8. Comparison Table by Industry of Square Footage and Employment from Damaged and Destroyed Buildings pre-9/11 and from Lower Manhattan post-9/11

Industry	No. of Establishments pre-9/11	No. of Establishments post-9/11	Absolute Change in No. of Establishments	% Change in No. of Establishments	Square Footage pre-9/11	Square Footage post-9/11	Absolute Change in Square Footage
Accounting	11	5	6	54.5%	40,239	26,121	14,118
Architecture/Design	12	5	7	58.3%	95,755	20,981	74,774
Business Services	84	26	58	69.0%	1,186,037	547,638	638,399
Communications	29	3	26	89.7%	1,631,526	1,330,998	300,527
Computer Services	64	19	45	70.3%	868,993	357,163	511,830
Concessions/Restaurant	38	19	19	50.0%	296,709	120,206	176,503
Construction/Engineering	19	4	15	78.9%	190,826	35,881	154,945
Consulting	20	3	17	85.0%	622,884	571,226	51,659
Education	2	2	0	0.0%	400,583	395,540	5,043
Government	28	9	19	67.9%	3,204,760	1,240,701	1,964,059
Health Care	17	6	11	64.7%	45,201	13,291	31,910
Hospitality	3	1	2	66.7%	935,945	380,052	555,893
Insurance	53	20	33	62.3%	2,803,920	753,589	2,050,331
Investments/Finance	318	93	225	70.8%	18,886,932	11,311,039	7,575,893
Law	100	43	57	57.0%	1,641,055	659,223	981,832
Manufacturing	8	0	8	100.0%	25,249	0	25,249
Non-profit	20	5	15	75.0%	343,385	239,164	104,220
Personal Services	48	9	39	81.3%	262,839	44,485	218,354
Publishing	9	4	5	55.6%	417,249	364,778	52,471
Real Estate	8	3	5	62.5%	37,493	20,624	16,869
Retail/Wholesale	64	12	52	81.3%	467,240	231,686	235,554
Technology	14	1	13	92.9%	73,565	1,800	71,765
Transportation	28	3	25	89.3%	242,968	17,242	225,726
Travel Agency	4	1	3	75.0%	14,134	8,339	5,795
Unknown	133	15	118	88.7%	627,729	30,933	596,796
Total	1,134	311	823	72.6%	35,363,214	18,722,700	16,640,515

Source: Urbanomics, based on multiple sources identified in 1.2

Note: 311 establishments had 11 additional destinations in Lower Manhattan for which post 9/11 employment and floorspace is shown.

Table 8 Continued. Comparison Table by Industry of Square Footage and Employment from Damaged and Destroyed Buildings pre-9/11 and from Lower Manhattan post-9/11

Industry	% Change in Square Footage	Employment pre-9/11	Employment post-9/11	Absolute Change in Employment	% Change in Employment
Accounting	35.1%	143	93	49	34.6%
Architecture/Design	78.1%	319	74	245	76.8%
Business Services	53.8%	4,141	1,888	2,253	54.4%
Communications	18.4%	3,211	2,155	1,056	32.9%
Computer Services	58.9%	3,258	1,412	1,846	56.7%
Concessions/Restaurant	59.5%	1,218	431	787	64.6%
Construction/Engineering	81.2%	745	155	590	79.1%
Consulting	8.3%	1,314	1,145	170	12.9%
Education	1.3%	295	277	18	6.1%
Government	61.3%	10,983	3,556	7,428	67.6%
Health Care	70.6%	162	48	114	70.6%
Hospitality	59.4%	2,096	1,357	739	35.2%
Insurance	73.1%	10,095	2,403	7,692	76.2%
Investments/Finance	40.1%	63,290	33,808	29,482	46.6%
Law	59.8%	4,516	1,606	2,910	64.4%
Manufacturing	100.0%	92	0	92	100.0%
Non-profit	30.4%	1,267	851	416	32.9%
Personal Services	83.1%	694	159	535	77.1%
Publishing	12.6%	673	486	187	27.9%
Real Estate	45.0%	118	69	49	41.7%
Retail/Wholesale	50.4%	2,146	1,293	853	39.7%
Technology	97.6%	279	10	269	96.4%
Transportation	92.9%	750	62	688	91.8%
Travel Agency	41.0%	50	30	21	41.0%
Unknown	95.1%	2,267	102	2,165	95.5%
Total	47.1%	114,124	53,469	60,655	53.1%

Note: 311 establishments had 11 additional destinations in Lower Manhattan for which post 9/11 employment and floorspace is shown.

Table 9. Relocations since 9/11 by Square Footage and Employment

Location	No. of Destinations	Pre 9/11		Post 9/11	
		Square Footage	Employment	Square Footage	Employment
Manhattan - Downtown	322	19,152,133	57,054	18,722,700	53,469
Manhattan - Valley	96	2,406,702	8,301	2,372,488	7,633
Manhattan - Midtown	192	7,565,992	27,702	7,609,219	25,072
Manhattan - Upper East Side	13	46,550	167	48,754	174
Manhattan - Upper West Side	6	10,017	35	10,017	35
Manhattan - Elsewhere	2	9,355	33	8,935	32
Brooklyn	34	394,384	1,335	680,417	2,199
Queens	58	115,891	407	168,504	508
Staten Island	16	23,314	84	28,314	89
Unknown or Multiple New York	72	802,817	2,977	800,727	2,935
Nassau	14	38,571	135	56,493	202
Rockland	3	24,390	87	17,807	64
Suffolk	11	41,756	149	41,756	149
Ulster	1	23,024	82	16,020	57
Westchester	11	1,047,413	2,590	795,169	2,233
New Jersey	103	1,090,333	4,680	3,271,775	11,679
Connecticut	11	58,816	222	313,101	1,087
Outside of Region -- US					
Alabama	2	6,500	34	6,500	34
Atlanta	1	31,773	113	22,108	79
California	4	42,932	154	39,581	141
Chicago	2	4,490	16	4,490	16
Colorado	1	18,061	65	18,061	65
Florida	4	8,827	32	10,382	33
Georgia	1	4,480	16	4,480	16
Illinois	2	7,260	19	5,320	19
Massachusetts	4	15,582	55	21,201	76
Midwest	1	9,000	32	9,000	32
Nebraska	1	342	1	342	1
North Carolina	1	1,000	4	1,000	4
Pennsylvania	1	750	3	800	3

Source: Urbanomics, based on multiple sources identified in 1.2

Note: "No. of Destinations" are not equal to "No. of Establishments" because some firms split into multiple destinations. Post 9/11 square footage and employment are underreported because of "Unknown" destinations.

Table 9 Continued. Relocations since 9/11 by Square Footage and Employment

Location	No. of Destinations	Pre 9/11		Post 9/11	
		Square Footage	Employment	Square Footage	Employment
Tennessee	1	1,437	5	1,437	5
Texas	1	6,247	22	10,158	36
Virginia	3	25,508	91	105,438	146
Washington DC	1	5,000	18	5,000	18
England	1	0	0	81,250	60
Korea	1	1,171	4	1,171	4
Elsewhere	5	71,416	222	44,033	106
Unknown	200	2,249,979	7,178	1,644,985	5,858
Summary					
Manhattan - Downtown	322	19,152,133	57,054	18,722,700	53,469
Manhattan - Valley	96	2,406,702	8,301	2,372,488	7,633
Manhattan - Midtown	192	7,565,992	27,702	7,609,219	25,072
Manhattan - Elsewhere	21	65,923	236	67,706	241
Brooklyn	34	394,384	1,335	680,417	2,199
Queens	58	115,891	407	168,504	508
Staten Island	16	23,314	84	28,314	89
Unknown or Multiple New York	72	802,817	2,977	800,727	2,935
Total New York City	811	30,527,155	98,095	30,450,074	92,146
Nassau	14	38,571	135	56,493	202
Suffolk	11	41,756	149	41,756	149
Long Island	25	80,327	284	98,249	351
Rockland	3	24,390	87	17,807	64
Ulster	1	23,024	82	16,020	57
Westchester	11	1,047,413	2,590	795,169	2,233
Mid Hudson	15	1,094,827	2,759	828,996	2,354
Total New York State	851	31,702,309	101,138	31,377,320	94,851
New Jersey	103	1,090,333	4,680	3,271,775	11,679
Connecticut	11	58,816	222	313,101	1,087
Rest of US	31	189,190	681	265,298	724
Elsewhere or Unknown	207	2,322,566	7,404	1,771,439	6,028
Total	1,203	35,363,214	114,124	36,998,932	114,370

Note: "No. of Destinations" are not equal to "No. of Establishments" because some firms split into multiple destinations. Post 9/11 square footage and employment are underreported because of "Unknown" destinations.

Chart 1. Establishments Represented in Destroyed and Damaged Buildings, prior to 9/11

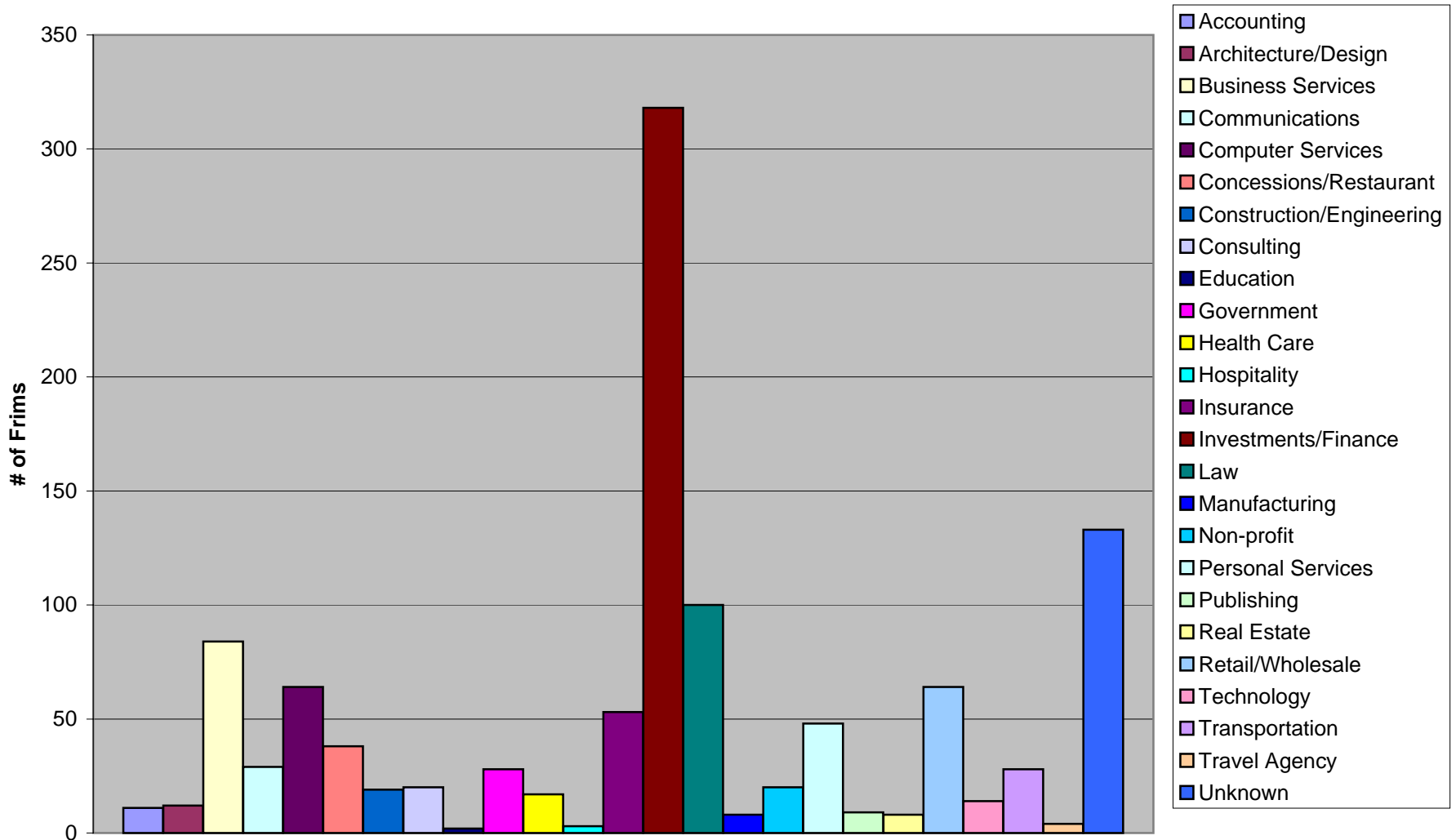
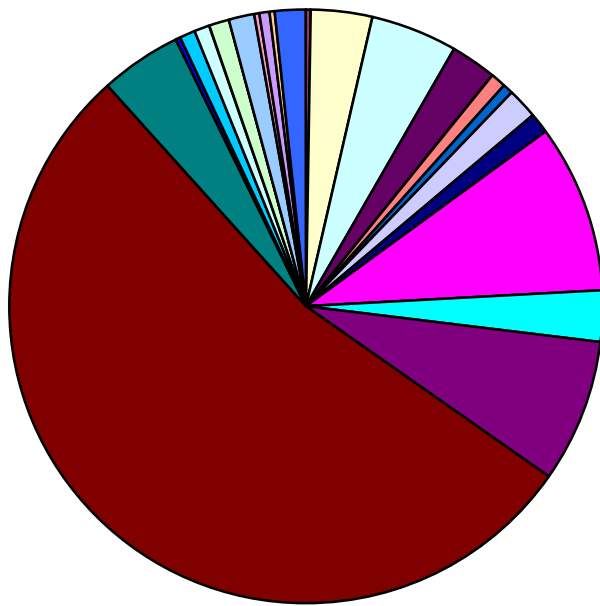
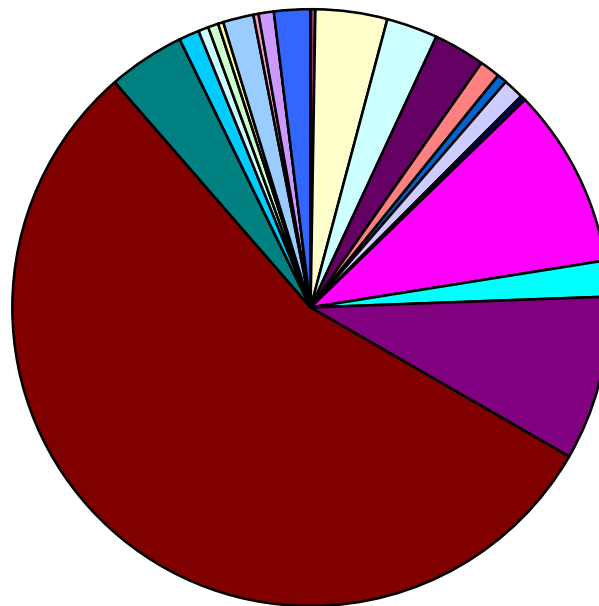


Chart 2. Total Square Footage and Employment in Destroyed and Damaged Building, prior to 9/11



Square Footage



Employment

- Accounting
- Architecture/Design
- Business Services
- Communications
- Computer Services
- Concessions/Restaurant
- Construction/Engineering
- Consulting
- Education
- Government
- Health Care
- Hospitality
- Insurance
- Investments/Finance
- Law
- Manufacturing
- Non-profit
- Personal Services
- Publishing
- Real Estate
- Retail/Wholesale
- Technology
- Transportation
- Travel Agency
- Unknown

Chart 3. Net Employment Losses from Lower Manhattan due to Destroyed and Damaged Buildings, Post 9/11

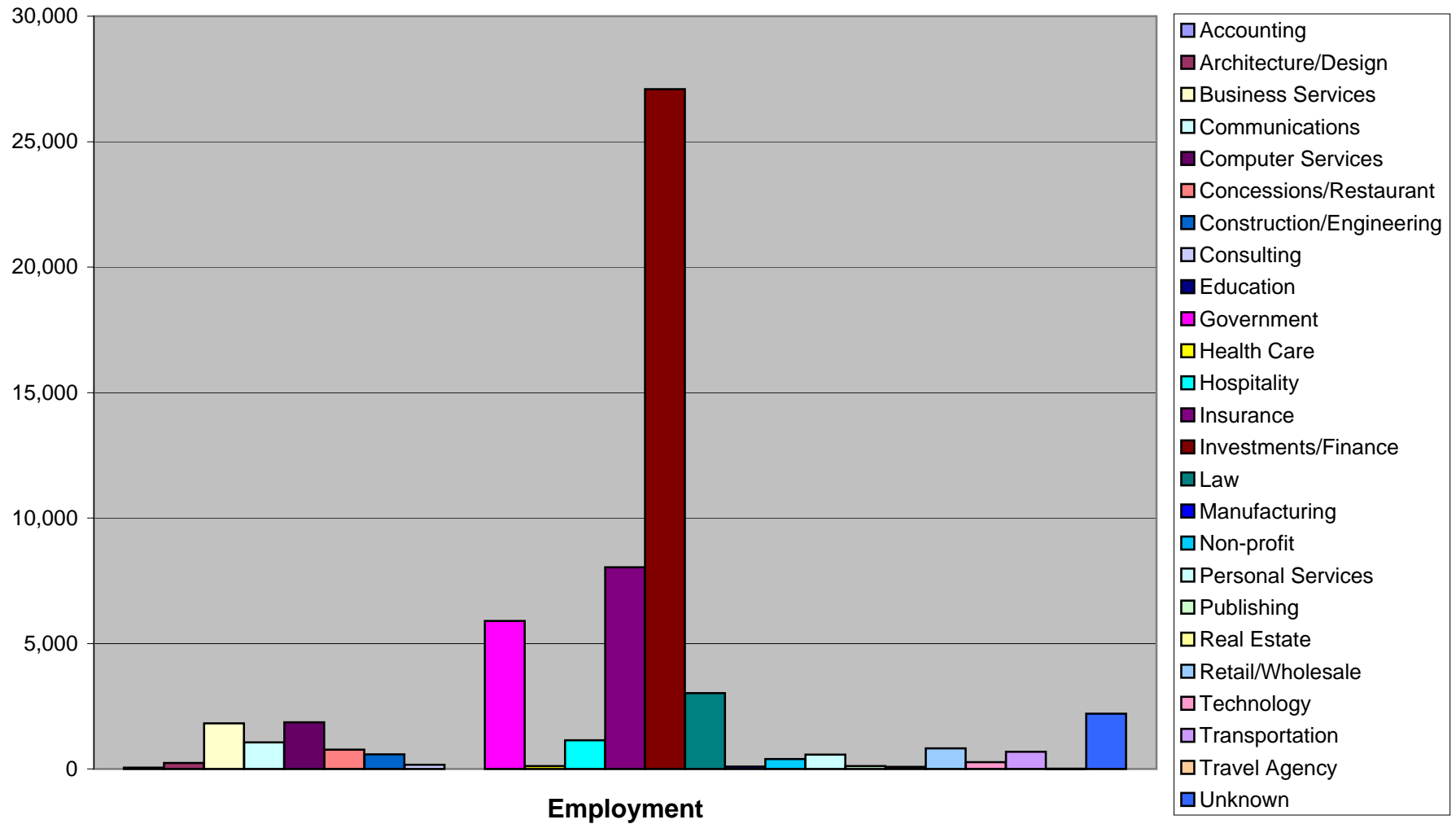
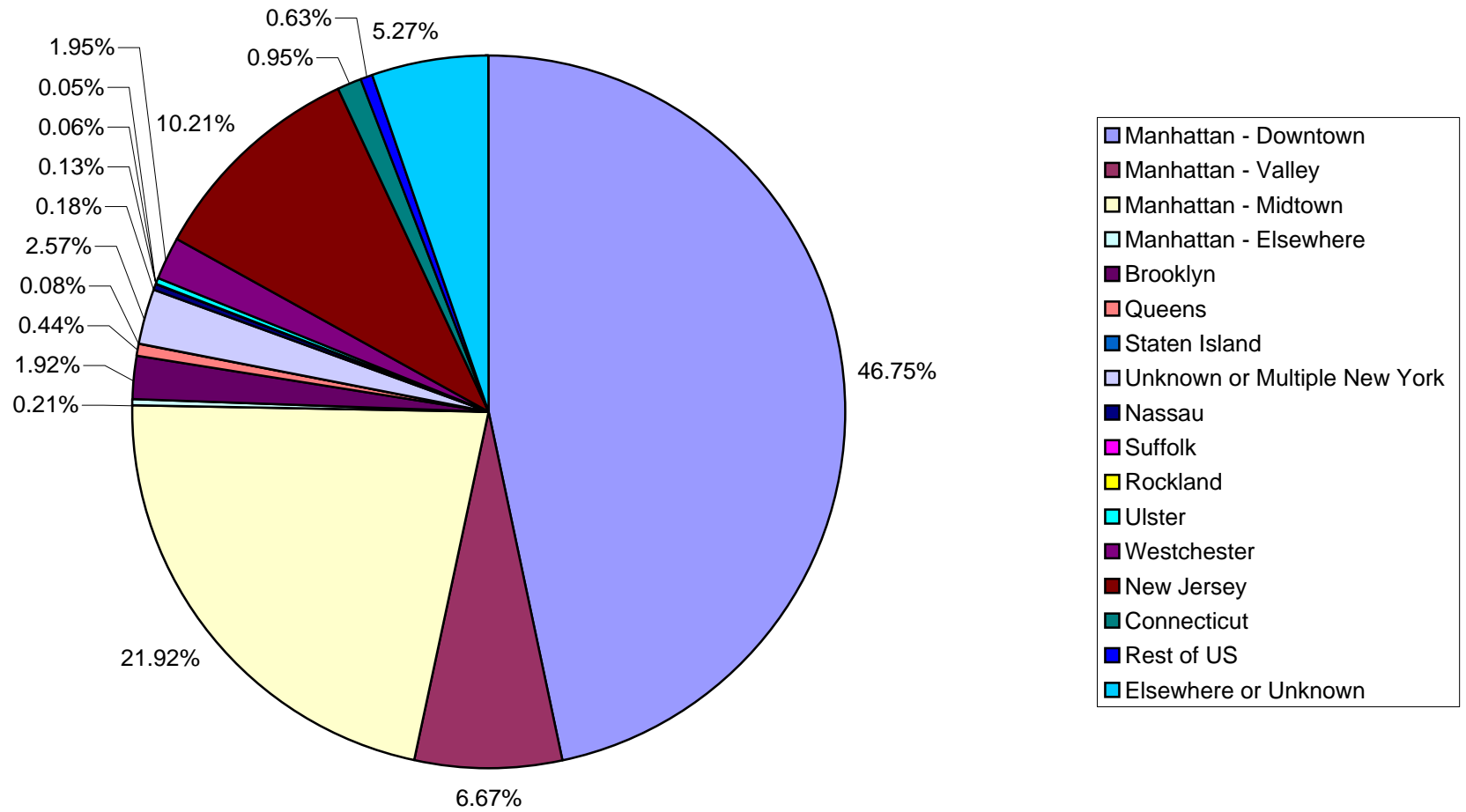
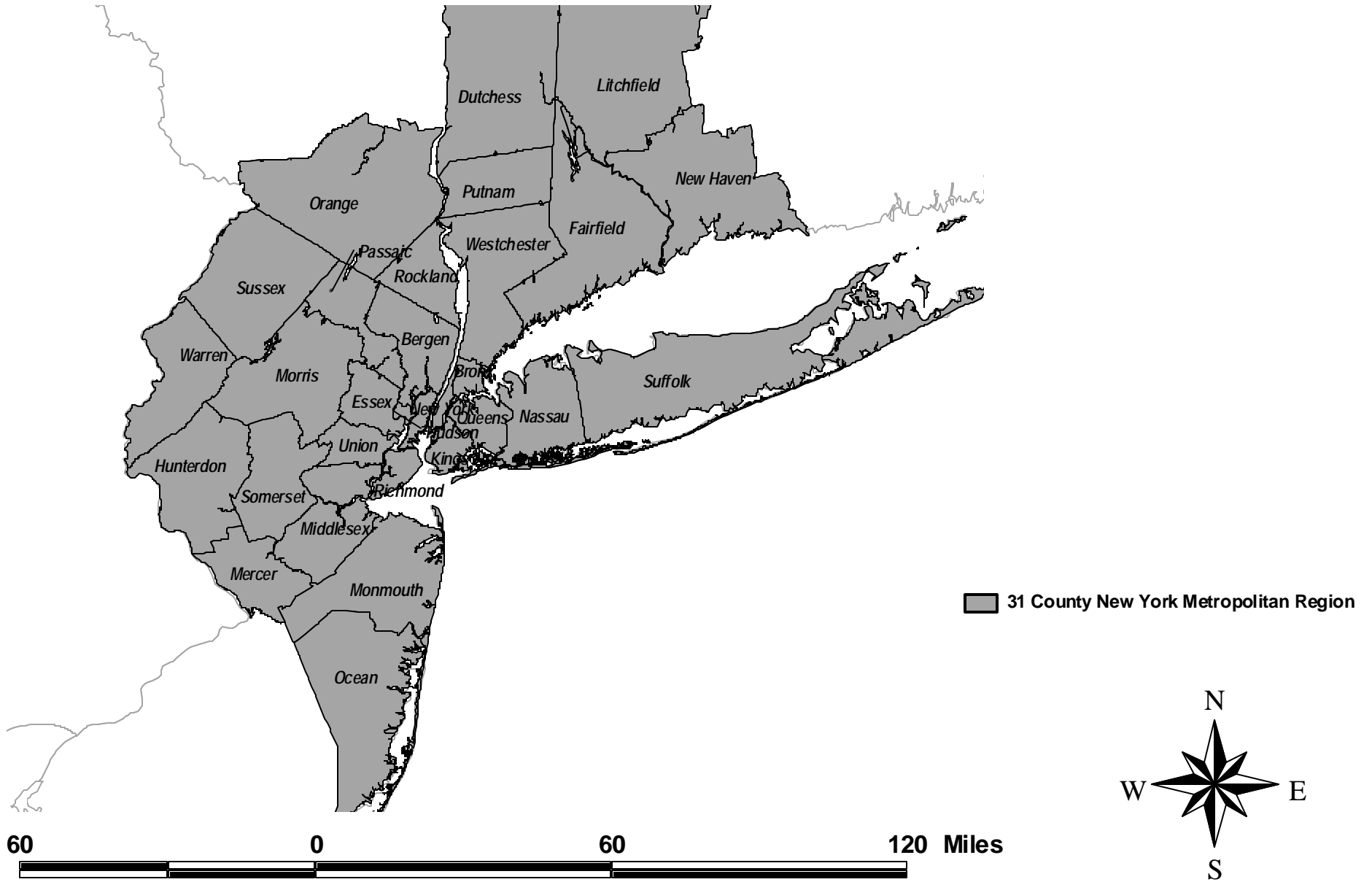
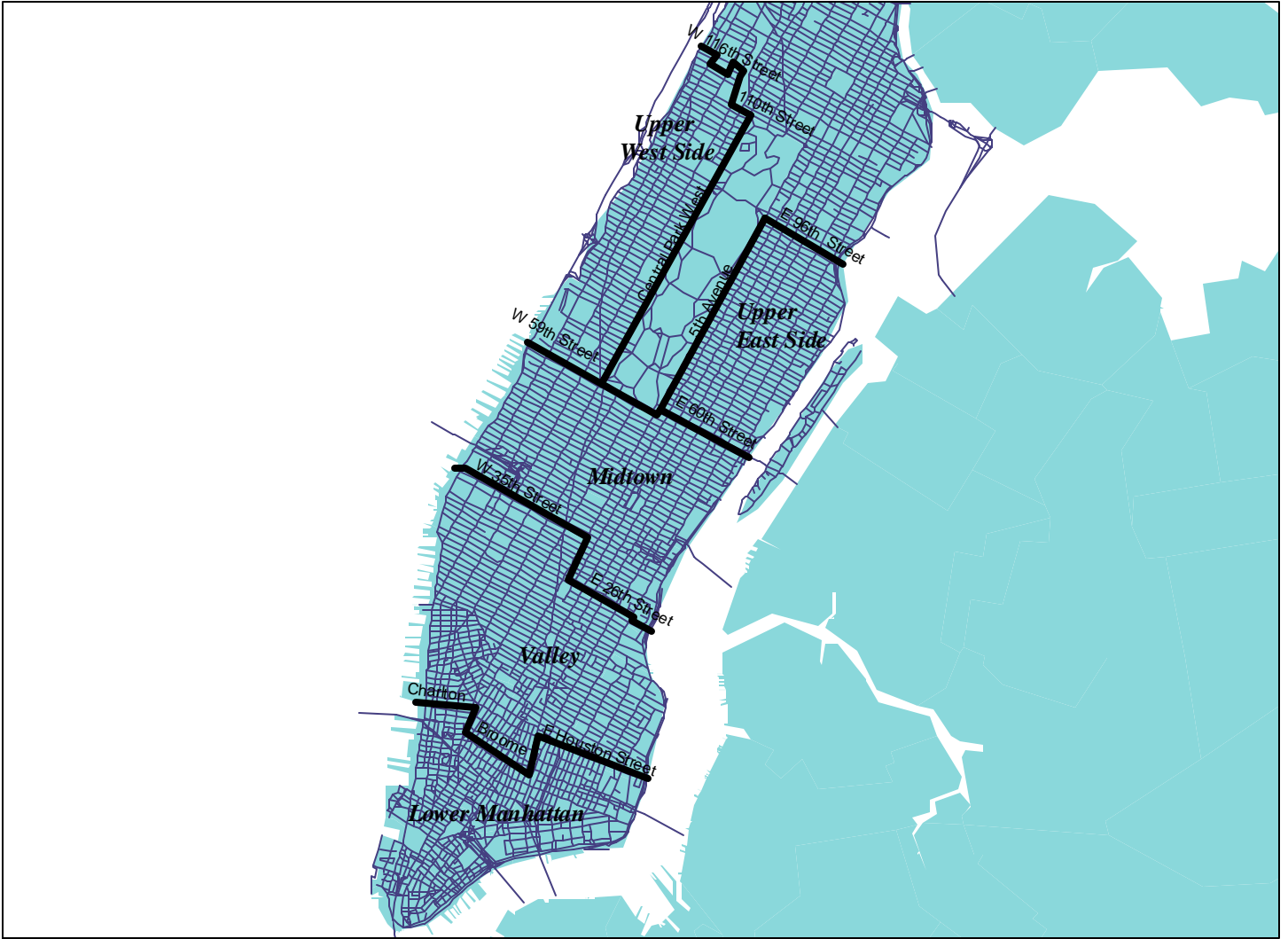


Chart 4. Relocations of Employment Since 9/11



Map 2. Thirty-One County Region

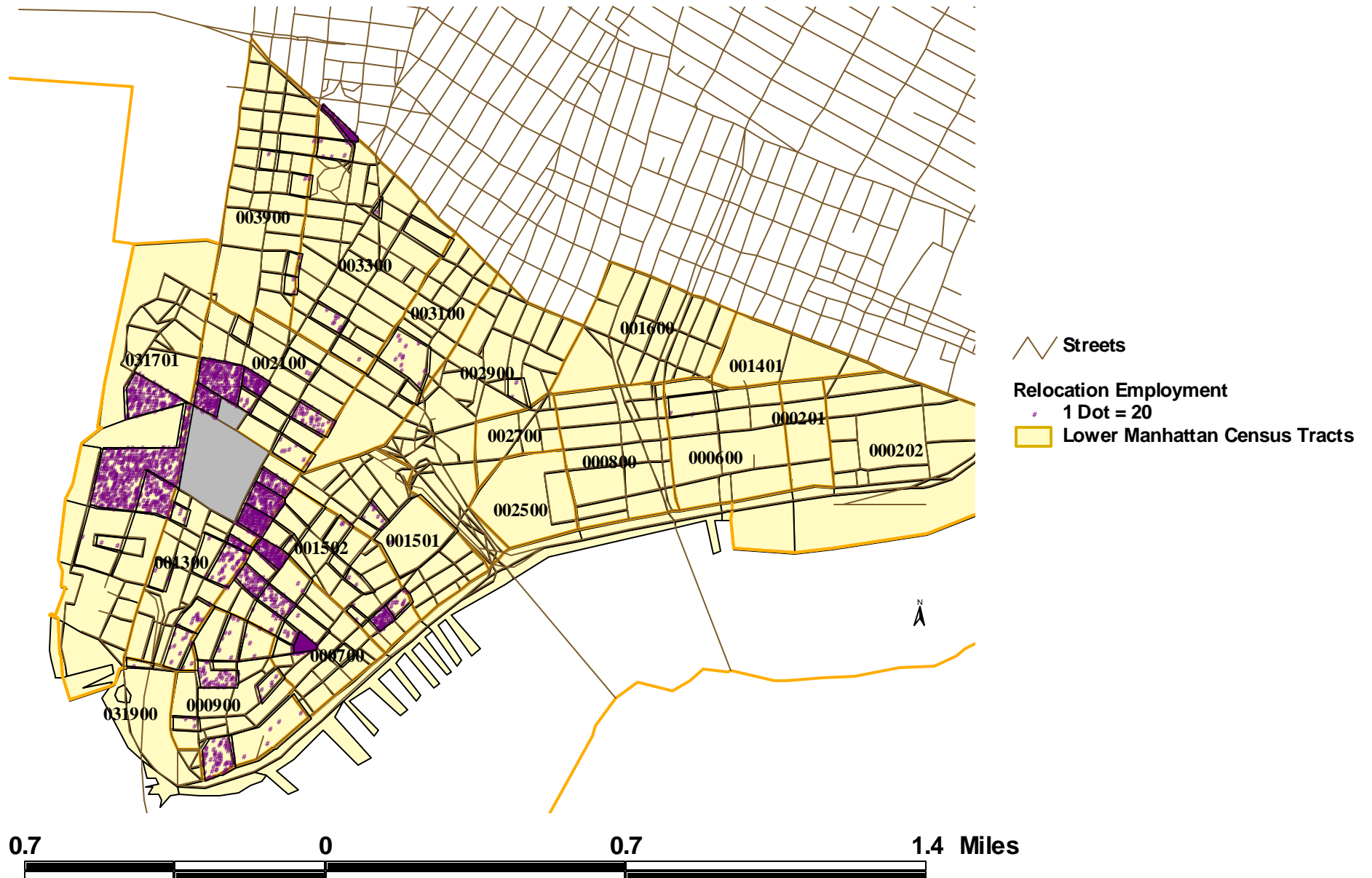




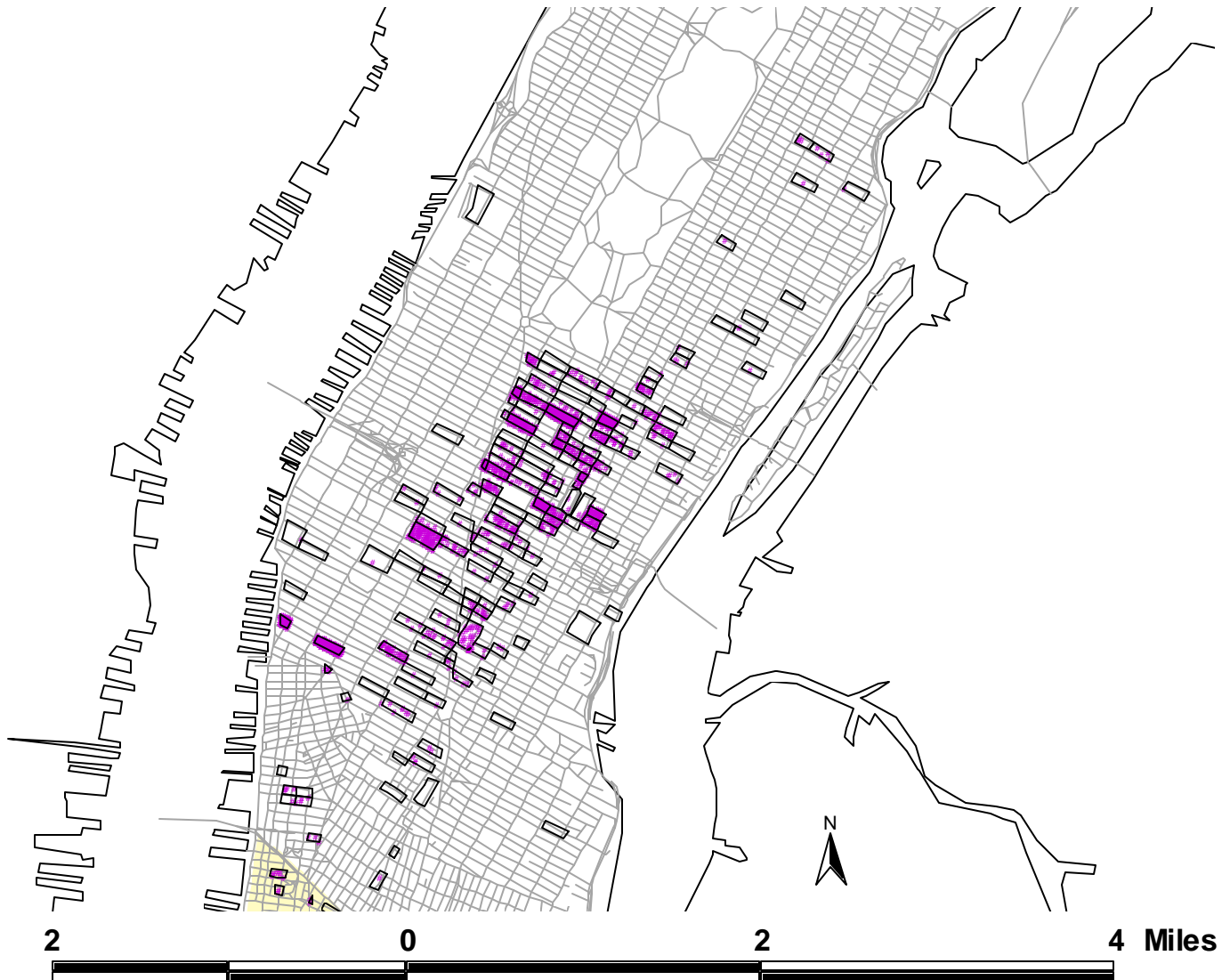
Map 3. Real Estate Neighborhood Divisions



Map 4. Lower Manhattan: Relocated Employment



Map 5. Upper Manhattan: Relocated Employment

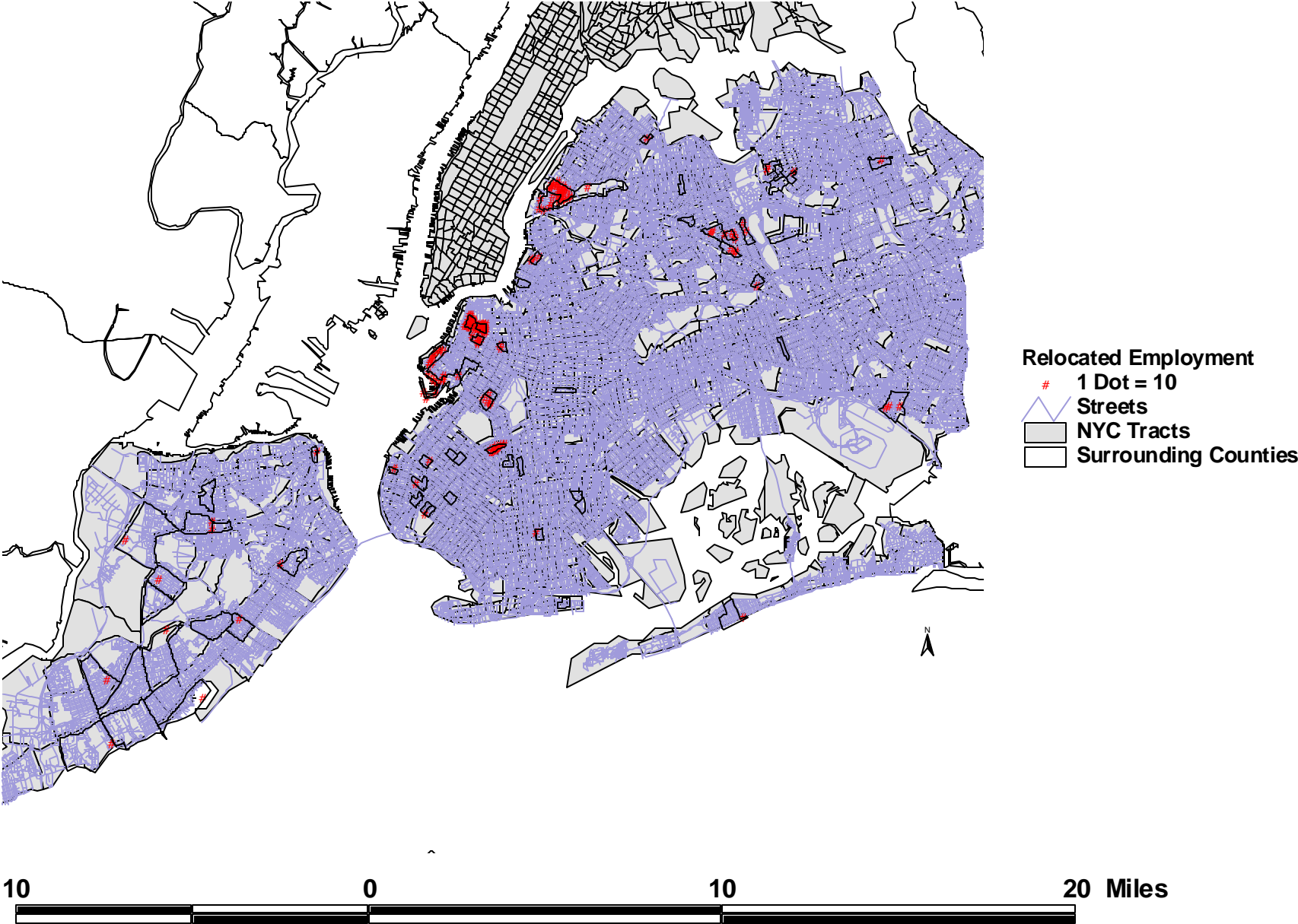


Tract Level Relocated Employment

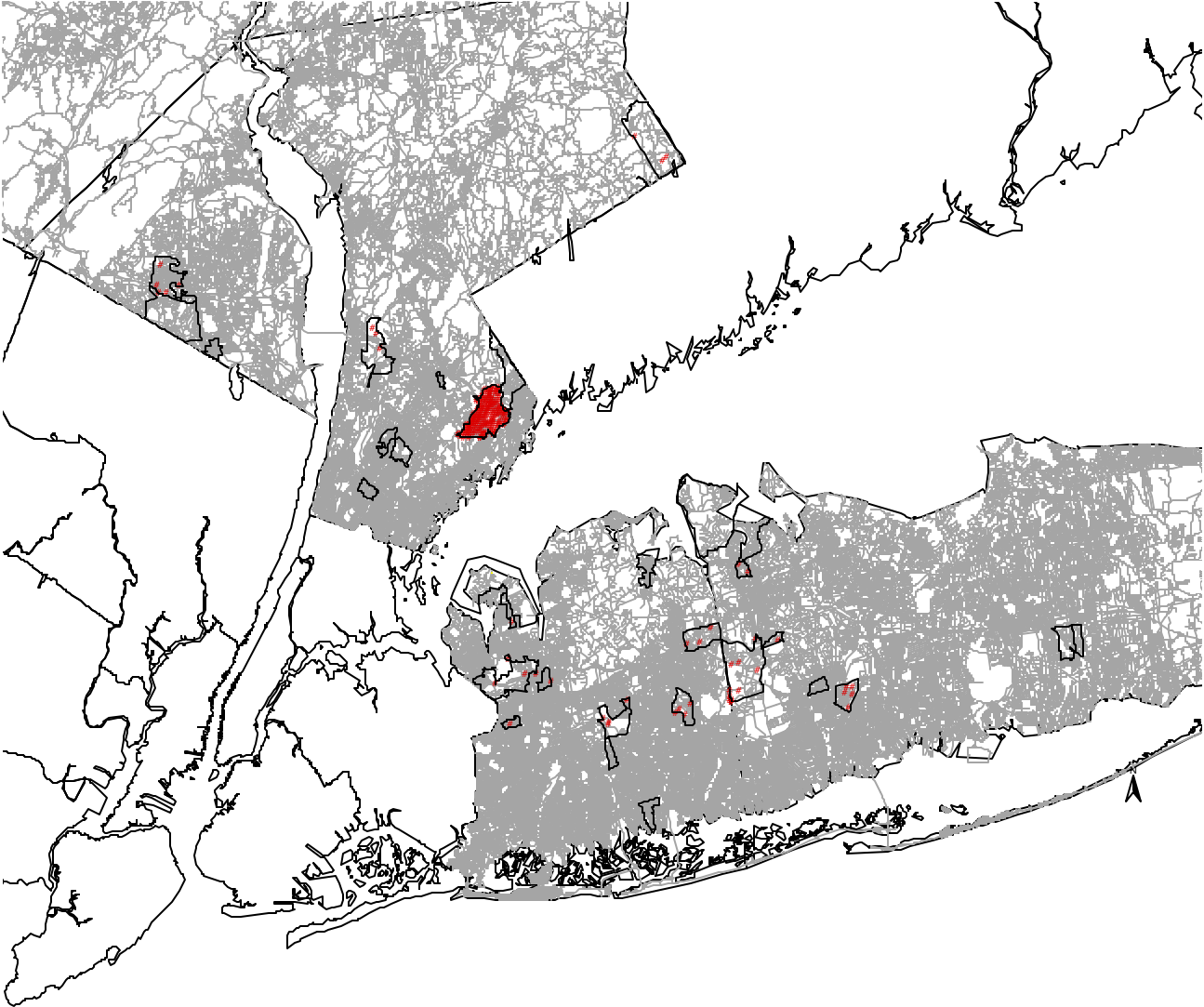
- 1 Dot = 20
- Manhattan Streets
- Lower Manhattan Census Blocks
- Surrounding Counties

Map by Urbanomics

Map 6. Outer Boroughs: Relocated Employment



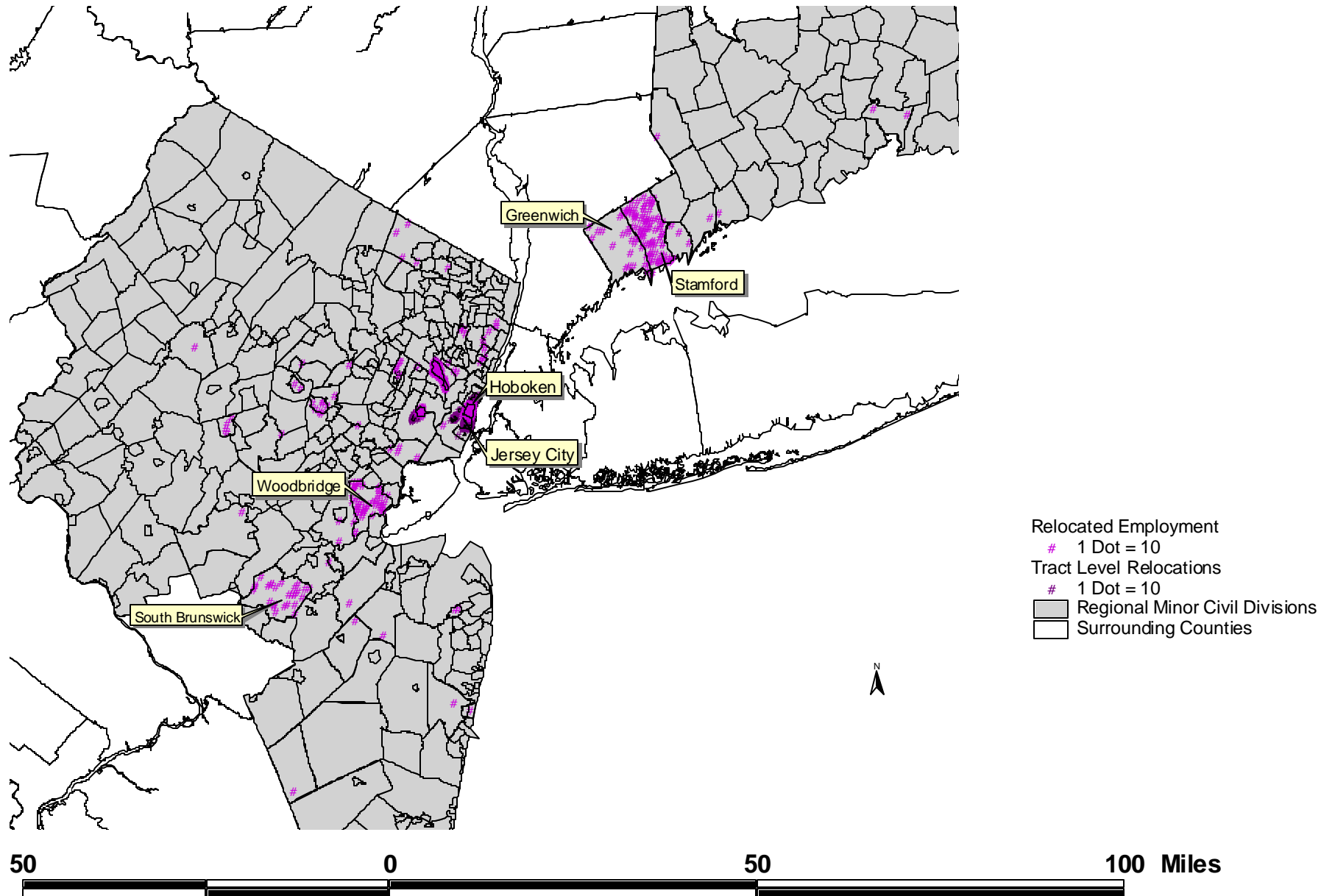
Map 7. Other New York Relocations



Relocated Employment
1 Dot = 10
Streets
Surrounding Counties



Map 8. Regional New Jersey and Connecticut: Relocated Employment



1 World Trade Center - North Tower

Tenant	Industry	Floor	Square Feet Leased	Employees	Status	Destination	New Square Footage	New Employment	Website	Email	Phone / Fax
50 States	N/A	2, Suite 222			moved to 301 East 69th Street, Suite 10A, NY, NY 10021	Upper East Side					
Abhiyan USA Inc.	N/A	46			moved to 350 Fifth Ave., Suite 3021, NY, NY 10018	Midtown				Gaurav Bahwa at mrpahwa@rediffmail.com	
Access-Tech	Technology	46			moved to 97-25 64th Ave., Apt A18, Rego Park, NY 11374	Queens					
Adam L. Goldberg, Law Office	Law	87, Suite 8735			moved to 330 16th Street, Brooklyn, NY 11215	Brooklyn					
Aderly USA	N/A	47, Suite 4763			moved to 10 E. 21st Street, Suite 600, NY, NY 10016	Midtown					
AERO / NETA	N/A	82			moved to 103-39 118th Street, Queens, NY	Queens				Kris Lavayen at clayav.aeroneta@programmer.net	
AIG Aviation Brokerage, Inc.	Insurance	53, Suite 5353	2,500	0 lost	moved its NY employees to its NJ office: 104 Carnegie Center, Suite 214, Princeton, NJ 08520	New Jersey			www.aigaviation.com		tel (609) 520-9800, fax (609) 520-9115
All Ecomers Inc.	N/A	46, Suite 4601			moved to 32 Lott Place, Brooklyn, NY 11234	Brooklyn					
Alliance Business Centers Network / Prime Office Centers	Business Services	79, Suite 7967		4 lost	moved to 44 Wall St, NY, NY 10005	Downtown	33,000		www.abcn.com	info@abcn.com	Patricia Healy at tel (212) 292-5100
Alliance Consulting Group	Business Services	102	7,095	22/7 lost	moved to 118 W. 22nd St., 10th fl., NY, NY 10011	Valley			www.alliance-consulting.com		tel 1-800-473-8066
Alliance Global Finance	Investments	79, Suite 7967		6	moved to 732 Pembroke Way, Ridgefield, NJ 07657	New Jersey		2			Max Kahn at tel (212) 618-1280
American Bright Signs	Computer Services	33, Suite 3361		3/0 lost	moved to 701 South West 27th Ave., Suite 610, Miami, FL 33135	Florida					
American Bureau of Shipping Engineers	Engineering	91, Suite 9165	8,400	22/0 lost	moved to 45 Eisenhower Drive, Paramus, NJ 07652	New Jersey	4,842	22	www.eagle.com		tel (201) 909-0499 and 909-5153
American Healthcare Indemnity	Insurance				moved to 12020 Sunshine Valley Drive, Suite 144, Reston, VA 20191	Virginia					
American Lota International / HS Futures LP	Transportation	45, Suite 4545	626	0 lost	moved to 45 River Drive South, Suite 2705, Jersey City, NJ 07310	New Jersey				Eric Slez at hsfutures@usa.net	
American TCC International Group, Inc.	Finance	47, Suite 4763 and 90, Suite 9063	5,736		moved to 61 Broadway, Suite 802, NY, NY 10006	Downtown			www.americantcc.com		in WTC: tel (212) 938-0977, fax (212) 938-0973
Amerinet Telecom Group Inc.	Telecommunications	22	428		may be reached at PO Box 1105, East Northport, NY 11731	Suffolk				Anthony Esposito at aresposito@csi.com	
Ameson Education and Culture Exchange Foundation / Ameson Group	Personal Services	83, Suite 8343	1,229		moved to 89-20 55th Street, Room 7U, Elmhurst, NY 11373	Queens			www.ameson.org	ameson@compuserve.com	in WTC: tel (212) 524-9465, fax (212) 524-9466
Anderson Davis and Cooper	N/A	22, Suite 2201		6/3 lost	moved to 431 Fifth Ave., 3rd floor, NY, NY 10016	Midtown		3			Joseph Mark at tel (212) 213-4223
Angel Electrical Construction Inc.	Construction	on site for 1 project			moved to 101 Worth St., NY, NY 10013	Downtown					tel (212) 962-0717
Ann Taylor Stores Corporation / Ann Taylor Loft	Retail	CNCR (and WFC 2)	7,200		lost 2 stores; moved employees to other NYC locations	New York			www.anntaylor.com		
Anne Pope, Law Offices	Law	35		20/0 lost	moved to 55 Broadway, NY, NY 10006	Downtown	2,500				tel (631) 273-2222
Aramark	Concessions	CNCR (also WTC 2 and WTC 7)		7 lost (total)	no new address given, but plans to return to the site when rebuilt	Downtown			www.aramark.com		tel (215) 238-3000 and 1-800-934-4598 (employee info)
Asahi Bank, Ltd.	Finance	60, Suite 6011	46,596	94/0 lost	moved to 101 East 52nd Street, 17th floor, New York, NY 10022; intends to close overseas offices by Sept 2002	Midtown	52nd Street: 8,000		www.asahibank.co.jp		tel (212) 432-6400 or (212) 750-7960, fax (212) 432-1135
AT&T Corporation	Communications	51	11,612 (incl. storage)	8 to 10/0 lost	relocated to existing offices, including headquarters at 32 Avenue of the Americas, 811 10th Ave., 33 Thomason St., and 75 Broad St., NY, NY; will not need any additional space	Downtown, Valley and Midtown			www.att.com		tel 1-800-423-4343
ATI Telecom	Telecommunications	45, Suite 4531			moved to 22 Cortlandt Street, NY, NY 10007	Downtown					Alisa Golfand
Avalon Partners	Investments	84, Suite 8423	5300	11/1 lost	moved to 60 Broad Street, Suite 3403, 34th floor, NY, NY 10004 (10-year lease)	Downtown				Vincent Au at vavow@aol.com	tel (212) 994-9508

1 World Trade Center - North Tower

Tenant	Industry	Floor	Square Feet Leased	Employees	Status	Destination	New Square Footage	New Employment	Website	Email	Phone / Fax
Avenir, Inc.	Computer Services	78, Suite 7867	2,162		moved to 16 Pearl Street, Suite 205, Metuchen, NJ 08840	New Jersey			www.avenirinc.com , www.avenirsolutions.com		tel (508) 520-9976, fax (508) 520-1382
Avesta Computer Services, Ltd.	Computer Services	21, Suite 2153	1,464	7/0 lost	temp. working from 15 Exchange Place, Jersey City, NJ 07302	New Jersey	3,500	7	www.avesta.com		Sharadha Lanka at tel (201) 369-9400
Avis Auto Rental	Business Services	CNCR			various NY locations	New York			www.avis.com		
Baltic Oil Corporation	Commodities	78, Suite 7821	981		no new address given	N/A				Roman Piltser at iz_a_p@hotmail.com	
Banco Latinoamericano de Exportaciones Sud America	Finance	89, Suite 8947	3,000	20/0 lost	moved to 641 Lexington Ave., 32nd floor, NY, NY 10022	Midtown		20	www.blx.com/eng.html	nyoffice@blx.com	tel (507) 210-8555, (212) 840-5400, (212) 754-9191, and (212) 644-6644, fax (212) 753-9060 and (212) 751-5923
Bank of America / Bank America Trust Co.	Finance	9-11 and 81, Suite 8101	132,586	400/3 lost	temp. located in Secaucus, NJ; will relocate to the Herald Square Shopping Mall, 100 W. 33rd Street, NY, NY 10001 in mid 2002; also negotiating for space at 40 W 57th St., NY, NY 10019	Valley and Midtown	33rd St.: 180,000; 57th St.:152,000		www.bofa.com		tel 1-800-556-6044, 1-800-930-8044, (888) 583-8900 and (877) 441-3723
Bank of Taiwan	Finance	53	7,500	16/0 lost	moved to the Crown Building Center, NY, NY; may be reached at headquarters: 91 Hengyang Road, Taipei, Taiwan 100, R.O.C.	New York					in Taiwan: tel 02-23493456, fax 02-23315840;
Barclay Dwyer	Consulting	89, Suite 8911	12,211	40	temp. moved to 1526 52nd Street, NY, NY 10022	Midtown		20			Jack Lefkowitz at tel (646) 623-5200
Berel & Mullen	Law	33, Suite 3347	2,786	0 lost	moved to 35 St. Mark's Place, NY, NY 10003	Valley	2,500				Harold Berel at tel (718) 447-5499
Bestland Trading & Development Corporation Limited	N/A				moved to 375 South End Ave., Suite 7B, NY, NY 10280	Downtown					
Beyondbond Inc.	Computer Services	46, Suite 4621	3,191	15	moved to 37 W 39th Street, 12th floor, NY, NY 10018	Midtown		12			Keen Pei at tel (212) 704-0227
Billy Tan Employment Agency	Business Services	46, Suite 4601			may be reached at PO Box 770722, Woodside, NY 11377	Queens				Bill Tan at billtanagcy@aol.com	
Blue Sky Technologies, Inc. / Suntendy USA	Computer Services	46, Suite 4643	350		moved to 432 Madison Ave., NY, NY 10022 and 50 West 23rd Street, NY, NY 10010	Midtown and Valley	Madison Ave: 500		www.suntendyusa.com	Charlie Chen at cstar@suntendyusa.com	Denise Peng at tel (917) 856-6994
Bob Farell	N/A	77, Suite 7705			moved to 10 Exchange Place, Suite 1404, Jersey City, NJ 07302	New Jersey					
Brainyworks of America Inc.	N/A	46, Suite 4663	1,169		moved to 693 Fifth Avenue, 17th floor, NY, NY 10022	Midtown					Tadashi Mitsui at tel (212) 339-9711, fax (212) 750-3600
Bramax Manufacturing (USA) Corporation	Wholesale	45, Suite 4533	800		no new address given	N/A			www.bramax.com		
Broad Street Capital Inc.	Investments	85			moved to 54 Pine Street, Suite 3, NY, NY 10005	Downtown				Jeffrey Nunez at jeffreyn@aol.com	
Broad USA, Inc.	Retail / Wholesale	89, Suite 8909	2,910		moved to 401 Hackensack Ave. Suite 503, Hackensack, NJ 07601	New Jersey			www.broadusa.com		
Broadway New York at World Trade	N/A				moved to 346 West 44th Street, NY, NY 10036	Midtown					
Bruce Fenton	Law				temporarily moved to 18 Mott Street, New York, NY 10013	Downtown					tel (646) 483-9728
C & P Press	Publishing	51		0 lost	moved to 302 Fifth Avenue, Fifth floor, NY, NY 10001	Valley			www.cppress.com	cpp@cpress.com	tel 1-800-544-7377 and (212) 695-5383, fax (212) 695-5127
Cadding Company SA	N/A	46			no new address given	N/A				Kevin Cadding at kdng@prodigy.net	
California Bank & Trust	Finance	16			may have returned to California; may be reached at main offices: 11622 El Camino Real, Suite 200, San Diego, CA 92130 and 300 Lakeside Drive, 8th Floor, Oakland, CA 94612 (2,000 total employees)	California?			www.calbanktrust.com		
Can-Achieve Consultants	Business Services	46	392		no new address given	N/A					tel (604) 689-0717

1 World Trade Center - North Tower

Tenant	Industry	Floor	Square Feet Leased	Employees	Status	Destination	New Square Footage	New Employment	Website	Email	Phone / Fax
Cantor Fitzgerald Securities	Investments	101-105	245,000	1,000/658 lost	temp. relocated to the Institutional Equity Sales and Trading Office at 299 Park Ave., 29th floor, NY, NY 10017; moving to 135 E. 57th Street, NY, NY, Darien, CT, Reston, VA, and London, England	Midtown, Virginia, and UK	57th St: 80,000; Darien, CT: 9,000; Reston, VA: 81,250; London: 81,250	100 hired	www.cantor.com		tel (212) 871-6710
Capital Partner LTD	Investments	14, Suite 1427			moved to 73 Hudson Street, NY, NY 10038	Downtown					
Carey D'Avino	Law		750		moved to Philadelphia	Pennsylvania	800				tel (212) 278-1382, fax (212) 278-1733
CARR Futures	Investments	92, Suite 9201 (and NY Mercantile Exchange)	34742	135/69 lost	moved to 666 3rd Ave., 9th Fl., NY, NY 10017 (13-year lease)	Midtown	17,525		www.carrfutures.com		tel (312) 441-4200 and (646) 658-3960, fax (646) 658-3999
Carroll McNulty & Kull LLC	Law				can be contacted at PO Box 427, Gladstone, NJ 07934	New Jersey					tel (908) 781-1500, fax (908) 781-1600
Caserta & Company / Caserta Jewelry	Retail / Wholesale	18, Suite 1842			moved to 18 Hammock Lane, Staten Island, NY 10312	Staten Island				Joseph Paterek at is@newwavepeople.com	tel (732) 650-0770 ext. # 225
Catskill Air / S.O.S. Communications	N/A	89, Suite 8911			moved c/o S.O.S. Communications, 1273 36th St., Brooklyn, NY 11218	Brooklyn				Joe Kohnfelder at soscomm@aol.com	
CAT Technology Inc.	Technology	21, Suite 2143	586	14	relocated to NJ office: 377 Rt. 17 S, Hasbrouck Heights, NJ 07604	New Jersey	1,000	4	www.catamerica.com	info@catamerica.com	Dinesh Jaiswal at tel (201) 727-9299, fax (201) 727-9296
Cedar Capital Management Associates	Investments	78, Suite 7841	909		moved to 300 West 55th Street, Suite 5V, NY, NY 10019	Midtown			www.cedarcapital.com	Misra Prashanta at misra@cedarca.com	Prashanta Misra at tel (212) 974-4090, fax (646) 414-4681
Cedel Bank International / Clearstream International	Finance				moved to 350 Madison Avenue, NY, NY 10017	Midtown			www.cedelbank.com		tel (212) 293-2300, fax (212) 293-2310
Chang Hwa Commercial Bank	Finance	32, Suite 3211	12,182	24/0 lost	moved to 685 Third Ave., NY, NY 10017 (15-year lease)	Midtown	3rd Ave: 13,180	24	www.chb.com.tw/english		tel (718) 242-6880 and 242-8815, fax (718) 242-7159 and 242-3808
Channel 2 (WCBS)	Telecommunications	110	400 (transmitter)	2/2 lost	transmitting from the Empire State building	Midtown			www.cbs.com and www.cbs2ny.com		
Channel 4 (NBC)	Telecommunications	104	400 (transmitter)	1 lost	established a new transmitter site, though still transmitting at reduced power (no new address given)	N/A			www.nbc.com		
Channel 5 Fox (WNYW)	Telecommunications	110	200 (transmitter)	0/0 lost	no new address given	N/A			www.fox.com and www.fox5ny.com		
Channel 11 (WPIX)	Telecommunications	110	400 (transmitter)	1/1 lost	using backup transmitter in Alpine, NJ, and an antenna at the Empire State Building	Midtown and New Jersey			www.wpix.com		
Channel 31 (WBIS)	Telecommunications	110	1400 (transmitter)	0/0 lost	no new address given	N/A					
Channel 47 (WNJU) Telemundo Noticiero	Telecommunications	110	800 (transmitter)	0/0 lost	no new address given	N/A			www.wnju.com and www.noticiero47.com		
Charles Chan CPA	Accounting	46, Suite 4683	392		moved to John Street, NY, NY 10038; may be contacted at 35 Eastern Drive, Kendell Park, NJ 08824	Downtown					Charles Chan at tel (212) 732-2288
Cheng Cheng Enterprises Holdings (USA), Inc.	Consulting	78, Suite 7803		3	moved to 88-11 34th Avenue, Apt 5K, NY, NY 11372	Queens		1			Jingguo Xu at (718) 672-1028
Chicago Board of Options Exchange Corp. / Chicago Options Exchange Corp.?	Finance	22	3,608	1 lost	returned to Chicago headquarters at 400 South LaSalle Street, Chicago, IL 60605	Illinois			www.cboe.com		in WTC: tel (212) 803-1400; in IL: tel 1-877-THE-CBOE
China Concept Consulting	Consulting	22, Suite 2207			moved to 420 East 66th Street, Apt 1D, NY, NY 10021	Upper East Side				Hulan Pan at hulanpan@hotmail.com	
China Daily Distribution Corporation	Personal Services	33, Suite 3369	813	3/0 lost	may be reached at PO Box 1579, NY, NY 10025	Upper West Side			www.chinadaily.com.cn		
ChinaMallUSA.com Inc.	Retail	22, Suite 2201			moved to 40-48 Main Street, Suite 303, Flushing, NY 11354	Queens				Chen Pu at chinamallusa@hotmail.com	
China Patent & Trademark Agent USA	Law	22, Suite 2205	400	5/0 lost	moved to 55 Broad Street, NY, NY 10004	Downtown			www.cptausa.com		tel (212) 912-1870, fax (212) 912-1873
China Resource Products USA Ltd.	N/A	53, Suite 5347			moved to 333 Sylvan Ave., Suite 210, Englewood, NJ 07632	New Jersey					in WTC: tel (212) 775-1028
China US Net Group	N/A	46, Suite 4633			moved to 15 E. 40th Street, NY, NY 10016	Midtown				George Yao at ccnyc@hotmail.com	
Clearforest Corp.	Business Services	47, Suite 4769	1,993	18/0 lost	moved to 15 East 26th Street, Suite 1711, NY, NY 10010	Valley		20	www.clearforest.com	Barak Pridor at barak@clearforest.com	Omer Malchin at tel (212) 432-1515 ext. 218, fax (212) 432-1929

1 World Trade Center - North Tower

Tenant	Industry	Floor	Square Feet Leased	Employees	Status	Destination	New Square Footage	New Employment	Website	Email	Phone / Fax
CNN / Turner Broadcasting / Cable Network News	Telecommunications	110	200		no new address given	N/A			www.cnn.com		
Commodity Futures Trading Commission	Finance	37, Suite 3747	35,000	0 lost	moved to 140 Broadway, fls. 19-20, NY, NY 10005 (10-year lease)	Downtown	140 Broadway: 39,400		www.cftc.gov/cftc/cftchome.html		tel (866) 616-1783, 1-800-621-3570, and (312) 781-1410; in NJ: tel (201) 234-6900, fax (201) 234-6966
Concord International Trade Corporation	Finance	46			moved to 102-17 64 Road, Apt. 3E, Forest Hills, NY 11375	Queens					
Continental Logistics, Inc.	Personal Services	21, Suite 2153	734		moved to 125 Park Avenue, 3rd floor, NY, NY 10017	Midtown				Ernst Heintze at continental_logistics@msn.com	tel (212) 867-1417
Conway & Conway	Law	33			temporarily moved to 666 5th Ave, New York, NY 10103	Midtown					tel (646) 496-1686, fax (646) 496-1687
Cosmos Services (America) Inc.	Insurance	89, Suite 8969		14	moved to 335 Madison Avenue, 22nd floor, NY, NY 10017	Midtown		14			Walter Pilipiak at tel (212) 709-3370
Crystal Castle Realty	Real Estate	79, Suite 7967			moved to 18 Mott Street, Suite 200, NY, NY 10013	Downtown					
CTS Inc.	N/A	55			temp. operating from 19 West 44th Street; signed a lease for 3 floors at 161 William Street, NY, NY 10038, in June, will occupy from Fall 2002	Downtown					
Dahao USA Corp	Retail / Wholesale	46	1,267	4/0 lost	moved to 2790 Broadway, Suite 4J, NY, NY 10025	Upper West Side					
Dai-ichi Kangyo Bank Ltd. / Mizuho	Finance	48-50, Suites, 4811?, 4911, and 5031	100,000	1491	temp. operating from 95 Christopher Columbus Drive, 17-18th floors, Jersey City, NJ 07302 and 1 Evertrust Plaza in Jersey City; will move to 666 3rd Ave., NY, NY 10017 (5-year lease)	Midtown		1,451	www.dkb.co.jp/english		in NY: tel (212) 649-0300, fax (212) 649-0396; in NJ: tel (201) 200-6100, fax (201) 200-6122
Data Transmission Network Corp.	Business Services	33	342		may have returned to Nebraska main office: 9110 West Dodge Road, Suite 200, Omaha, Nebraska 68114	Nebraska?			www.dtn.com		in Nebraska: tel (402) 390-2328
David Peterson, Law Offices	Law	84, Suite 8471	1,863		moved to 140 Broadway, 46th Floor, NY, NY 10005	Downtown					tel (212) 558-6884, fax (212) 480-3617
Daynard & Van Thunen Co.	Insurance	79	4,750	0 lost	moved to 48 Wall Street, NY, NY 10005	Downtown	5,000	20			tel (201) 420-0040
Delta Airlines	Transportation	CNCR	400		has 3 NYC ticket offices	N/A			www.delta.com/home		
Devan & Blakely Daily Soup	Concessions	CNCR			moved to 250 Park Avenue, NY, NY 10177	Midtown					
Direct Guidance Inc.	Personal Services	79, Suite 7967			moved to 84 Fawn Hill Road, Saddle River, NJ 07456	New Jersey			www.directguidance.com	Michael Quinn at mick@directguidance.com	
Dragon Coach	N/A	22, Suite 2201			moved to 40-48 Main Street, Suite 303, Flushing, NY 11354	Queens					
Drinker Biddle & Reath	Law	89, Suite 8961	10,000	16/0 lost	moved to 30 Broad Street, 30th floor, NY, NY 10004	Downtown	5,000		www.dbr.com		tel (973) 579-7160 and (212) 248-3140, fax (973) 360-9831 and (212) 248-3141
Dun & Bradstreet, Inc.	Business Services	14	22,750	65/0 lost	moved to 512 7th Ave., NY, NY 10018 (5-year lease)	Midtown	22,750	65	www.dnb.com	Tony Mattessich at mattessich@dnb.com	tel 1-800-234-3867
Dunavant Commodity Corporation / Enterprises Inc.	Investments	45, Suite 4569	1,437	0 lost	returned to Tennessee headquarters: 3797 New Getwell Road, Memphis, TN 38118	Tennessee			www.dunavant.com		Louis Cabario at tel (212) 732-6920, fax (718) 948-2241
Dynamic	N/A				moved to 1180 Ave. of the Americas, 14th floor, NY, NY 10036	Midtown					
Elro Corporation	Computer Services	46, Suite 4691			moving to 244 Madison Ave., Suite 357, NY, NY 10016; temp. located in Brooklyn	Midtown	Brooklyn: 1,700		www.elro.com	mail@elro.com	tel 1-800-305-3576, fax (212) 202-3766
eMeritus Communications	Communications	83	7,203		moved to 380 Lexington Ave, Suite 519, NY, NY 10168	Midtown			www.emerituscorp.com		tel (212) 871-2002
Empire Health Choice / Empireblue / Blue Cross and Blue Shield	Insurance	17, 19, 20, 23, 24, and 27-31	461,000	1,800/9 lost	moved to 11 West 42nd Street, fls. 16-19, NY, NY 10036 (14-year lease) and MetroTech 9 South, Brooklyn, NY	Midtown and Brooklyn	42nd St.: 105,429; Brooklyn: 322,000	1,300	www.empirehealthcare.com		John Donovan at tel (212) 476-1000, fax (631) 577-3846
Eric S Hutner	Law		300		moved to 1 Penn Plaza, NY, NY 10119	Valley	250		www.hutnerlaw.com	erichutner@hutnerlaw.com	tel (201) 251-6575

1 World Trade Center - North Tower

Tenant	Industry	Floor	Square Feet Leased	Employees	Status	Destination	New Square Footage	New Employment	Website	Email	Phone / Fax
ESpeed Inc.	Investments	101, 103-105 (see Cantor Fitzgerald)		see Cantor Fitzgerald	moved to 299 Park Ave., NY, NY 10171 (Cantor Fitzgerald offices)	Midtown		306	www.espeed.com		
E World Inc. / Master	Investments	79, Suite 7967			no new address given	N/A			www.eworldinc.com	P. Alix Nicolas at chessmaster@eworldinc.com	
Ferromin International Trade Corp.	Commodities		2,384		moved to 188 East 64th Street, NY, NY 10021	Upper East Side					
First Union Securities / Wachovia	Investments		13,000		moved to 40 Broad Street, NY, NY 10004	Downtown	12,996		www.firstunionsec.com		tel (212) 909-0050, fax (212) 909-0060
Frank W. Lin & Co. Inc.	Consulting	89, Suite 8955			moved to Franklin Lakes, NJ 07417; may be reached at 144-44 Sandord Avenue, Apt 5C, Flushing, NY 11355	New Jersey					
Fred Alger Management / Alger Fund	Investments	93, Suite 9333	36,078	55/35 lost	temp. moved to Morristown, NJ; will move to 111 Fifth Avenue, fls. 2-3, NY, NY 10003 and 390 Montgomery Street, NY, NY, 10002 by mid 2002	Valley and Downtown	5th Ave.: 40,000		www.fredalger.com		tel (201) 547-3650
Friends Ivory & Sime, Inc.	Investments	21, Suite 2101	13,262	15/0 lost	closed its NY office and relocated to London	England		50	www.friendsivoryfunds.com		tel (212) 644-8770
Futures and Options Program	Finance				moved to 40 Exchange Place, NY, NY 10271	Downtown				Barbara Christen at bchristen@downtownny.com	
Garban-Intercapital	Investments	25-26 (and WTC2)	60,548	752/1 lost	temp. moved to 560 Washington Blvd., Jersey City, NJ; moving to Harborside Financial Center Plaza 5, fl. 11-12, Jersey City, NJ (15-year lease)	New Jersey	Harborside Financial Center, Jersey City: 111,451	Washington Blvd.: 550 (will move to Harborside); Harborside: 200	www.icap.com and www.garban.com		Doug Rhoten and Rose Higgins at tel (212) 406-1100 and (201) 369-5659
Garippa Lotz & Giannuario	Law				moved to 66 Park Street, PO Box 1584, Montclair, NJ 07042	New Jersey					tel (973) 744-1688, fax (973) 744-1641
Gary Cicio, M.D.	Health Care				moved to 26 Broadway, Suite 739, NY, NY 10004	Downtown					
Geiger & Geiger	Law	4, 25, and 78	1,588	3/0 lost	no longer in business	N/A					tel (212) 466-1190
General Telecommunications	Telecommunications	83, Suite 8331	8,994	37/13 lost	moved to 150 W 22nd Street, 12th floor, NY, NY 10011	Valley			www.generaltele.com		tel (646) 328-5800, fax (212) 328-5848
Global Crossings Holdings Ltd.	Computer Services	83	20,750		will operate from Seven Giralda Farms, Madison, NJ	New Jersey					tel (973) 410-8300
Global Insight Inc.	Consulting	11, Suite 1109			moved to 1000 Winter Street, Suite 4300, Waltham, MA 02451 and 530 Fifth Ave., NY, NY 10036	Massachusetts and Midtown			www.dri-wefa.com	Joseph Kasputys at Joe.Kasputys@dri-wefa.com	
Globulcom Consulting LLC	Consulting	33, Suite 3365	814	12	moved to 1100 Valley Brook Avenue, Suite 202, Lyndhurst, NJ 07071	New Jersey		5	www.globul.com	drago@globul.com	Drago Boykov at tel (201) 842-0030
Gold Sky Inc.	Manufacturing	22, Suite 2287	421	6	moved to the Empire State Building	Midtown	200		www.goldsky.com	sales@goldsky.com	tel (718) 633-6211, fax (718) 633-6920
Golden King (USA) Ltd.	N/A	33, 3373	190		moved to 42-10 Colden Street, Rm. 402, Flushing, NY 11355	Queens					Fei Sun at tel and fax (718) 886-0508
Golish Capital Management	Finance	83			moved to 132 Frank Court, Mahwah, NJ 07430	New Jersey					
Greatest Bar on Earth	Restaurant	107	13,333		no new address given	N/A			www.windowsontheworld.com		tel (877) 226-5170
GSW and Associates / Gayer, Shyu and Wiesel	Accounting	52, Suite 5251	882		moved to 3 E 28th Street, 7th Floor, NY, NY 10016	Midtown				Kevin Shyu at gswcpa@aol.com	tel (212) 686-7777
G. Z. Stephens, Inc.	Business Services	47, Suite 4749	1,200	0 lost	moved to 152 W. 57th Street, NY, NY 10019	Midtown				Joan Zimmerman at Wallachlaw32@aol.com	
Hill Betts & Nash, LLP	Law	52, Suite 5215	21,609	30/0 lost	moved to 99 Park Ave, 20th floor, NY, NY 10016 (1.5 year lease)	Midtown	21,000		www.hillbetts.com	Mark Jaffe at mjaffew@hillbetts.com	tel (212) 839-7000, fax (212) 466-0514
Hitachi Software Engineering America Ltd.	Computer Services	46, Suite 4671	1,191		moved to 575 Lexington Ave., Suite 400, NY, NY 10022	Midtown			www.hitachi-soft.com		tel (212) 527-7518, fax (212) 527-7519
Holt Construction Corp.	Construction	22, Suite 2253	1,338		moved to 50 East Washington Ave., Pearl River, NY 10965	Rockland					Paula Lillis at (845) 735-4054
Honor Chemical Inc. / Quantum Business Solutions	Business Services	46, Suite 4697	327		moved to the Empire State Building, Suite 5805-06, NY, NY 10118	Midtown					Sanjay Phanse at tel (609) 750-8700
H. Taufiq Choudhury Esq.	Law	22, Suite 2203	1,356	4	moved to 53 W 36th St, New York, NY 10018	Midtown	1,400	3		H. Taufiq Choudhury at htcesq@mindspring.com	tel (212) 279-2800, fax (212) 239-8891

1 World Trade Center - North Tower

Tenant	Industry	Floor	Square Feet Leased	Employees	Status	Destination	New Square Footage	New Employment	Website	Email	Phone / Fax
Huan Tong International (USA) Co., Ltd. / Echina Inc.	Retail / Wholesale	33, Suite 3353	583		temp. moved to 2 Penn Plaza, Suite 1500, NY, NY 10121	Valley			www.echina.com	Shan Xie at shanxie@echina.com	tel (212) 292-5028, fax (212) 292-5027
Hyundai Securities Company Ltd.	Investments	45, Suite 4525	1,600	8/0 lost	no new address given	N/A			www.hyundai.net		
Inho Andrew Park	Law				temp. moved to 140 Broadway, NY, NY 10005	Downtown					tel (212) 858-7695, fax (212) 858-7697
Instinct Software	Computer Services	47			moved to 900 Broadway, Suite 704, NY, NY 10003	Valley					Robert Gumenick at tel (212) 608-7478
Instinet Group, Inc.	Finance	13 and 14	65,844	214/2 lost	moved to its 3 Times Square office, NY, NY 10036, 850 and 875 3rd Ave., NY, NY 10022, and Newport Financial Center, Harborside, Jersey City, NJ	Midtown and New Jersey	Harborside, NJ: 150,000		www.instinet.com		
Insurance Overload Systems	Insurance				moved to 11 Penn Plaza, 5th floor, NY, NY 10001	Valley					
INTA21	N/A				moved to 68-20 136th Street, Unit B, Flushing, NY 11367	Queens				Mohammad Irsan at fipi@att.net	
Intermat Trading	Retail / Wholesale	78, Suite 7873			moved to 8 Ariel Court, Port Washington, NY 11050	Nassau					Mitchel Tamkin at tel (516) 622-6600
International Office Centers Corporation / Regus Business Centers	Personal Services	79 (see WTC 2)	26,367	2 lost	backfilling space at 245 Park Avenue, 24th and 39th floors, NY, NY 10167	Midtown	Park Ave.: 70,000		www.regus.com		tel (212) 792-4000 and (914) 304-4100, fax (212) 792-4001
International Trade Center, Inc.	Business Services	78, Suite 7885	3,298		moved to 160 East 65th Street, Apt 2C, NY, NY 10021	Upper East Side				Lucio Caputo at lwsi@aol.com	
InternetFundManager.com	Investments	87, Suite 8735			moved to 244 Fifth Ave., Suite 2801, NY, NY 10001	Valley			www.internetfundmanager.com		
Investor Data Services	Investments	87, Suite 8735			may be reached at the Pullman Green Station, PO Box 897, NY, NY 10274	Downtown				Francine Goodman at stocktransfer@yahoo.com	
J&X International Corp.	Retail / Wholesale	46, Suite 4687		3	moved to 35th Street; may be contacted at 19 Jillian Court, Staten Island, NY 10310	Midtown		3			Tracey Shen at tel (718) 816-0692
Jensen & Jensen	Law	46, Suite 4627	7,261		moved to 500 Fifth Avenue, Suite 1550, NY, NY 10110	Midtown			www.jensenlaw.com	Peter Jensen at ptjensen@jensenlaw.com	tel (212) 737-5800, fax (212) 737-5900
JLJ International NY Inc.	N/A	46, Suite 4647			moved to 481 8th Ave., Suite 731, NY, NY 10001	Valley					
Jonathan Jurus	N/A	83, Suite 8365			moved to 565 85th Street, Suite B410, Brooklyn, NY 11209	Brooklyn				jdjurus@yahoo.com	
Joseph Cacucciolo	N/A	83			moved to 45 Nicolosi Drive, Staten Island, NY 10312	Staten Island					
Julien J. Studley, Inc.	Real Estate	86, Suite 8617	6,372	12/2 lost	moved into Corporate headquarters at 300 Park Ave., NY, NY 10022	Midtown			www.studley.com		tel (877) 927-8835 and (212) 326-1000
Jun He Law Office, LLC	Law	89, Suite 8911	894		no new address given; may be contacted at headquarters: China Resources Building, 20th floor, 8 Jianguomenbei Avenue, Beijing 100005, China	N/A			www.junhe.com	junheny@junhe.com	in WTC: tel (212) 775-8610, fax (212) 775-8533; in China: tel 86-10-8519-1300, fax 86-10-8519-1350
Justholl Co.	Retail / Wholesale	46, Suite 4679			moved to 540 Cumberland St., Englewood, NJ 07631	New Jersey					
Kading Companies SA	Finance	46, Suite 4695	359		moved to 645 Fifth Ave., Suite 403, NY, NY 10022	Midtown				Kevin Kading at kdng@prodiqy.net	tel (718) 981-5678
Kaiser Overseas Inc.	Manufacturing	22, Suite 2283	265		moved to 17 Jay Lane, Holbrook, NY 11741	Suffolk			www.kaiseroverseas.com		Vijay Vora at tel (631) 589-8925
Karin Batten	Design				may be reached at June Kelly Gallery, 591 Broadway, NY, NY 10012	Valley			www.junekellygallery.com		tel (212) 226-1660
Karoon Capital Management / Montauk Financial Group	Investments	22, Suite 2227	991	10/0 lost	moved to 333 Faimount Ave., Apt. 30, Jersey City, NJ 07306 (1-year lease)	New Jersey		9	www.montaukfinancial.com	Kayvan Karoon at kkaroon@montaukfinancial.com	tel (917) 509-5969
Kathode Ray Media Inc.	Telecommunications	47, Suite 769			moved to 120 Boerum Place, Suite 3D, Brooklyn, NY 11201	Brooklyn			www.kathoderay.com	Kathleen Packard at kath@kathoderay.com	
Keenan Powers & Andrews	Law	53, Suite 5361	4,500	25/0 lost	moved to 245 Park Ave., NY, NY 10167	Midtown	4,500	20	www.kpalaw.com	www.kpa@kpalaw.com	tel (212) 432-5650, fax (212) 432-5606
Kemper Insurance Companies	Insurance	35 and 36	92,232	230/0 lost	moved to 30 Rockefeller Center, 11th and 12th floors, NY, NY 10112 (5-year lease)	Midtown	65,381		www.kemperinsurance.com		tel 1-800-622-9966 and Princeton office: (609) 936-3000
Koudis International Inc.	Retail / Wholesale	33, Suite 3351	695	3/0 lost	moved to 8310 10th Avenue, Brooklyn, NY 11228	Brooklyn	200	3		Michael Koulouroudis at mikoudis@aol.com	tel (718) 748-6054, fax (718) 238-1938

1 World Trade Center - North Tower

Tenant	Industry	Floor	Square Feet Leased	Employees	Status	Destination	New Square Footage	New Employment	Website	Email	Phone / Fax
L Blake Morris	Law	52	547		moved to 1214 Cortelyou Rd, Brooklyn, NY 11218-5404	Brooklyn				lmmorris@juno.com	tel (718) 826-8401
Landmark Education Corporation	Personal Services	15	44,407	14/0 lost	temp. moved to 40 West 57th Street (15-month lease); moving to 312 West 34th St., NY, NY 10001 in Oct. 2002	Valley	5,000	14	www.landmark-education.com		tel (212) 824-3300
Lanka Shipping Lines Inc.	Transportation				moved to 1115 Inman Ave., Suite 323, Edison, NJ 08829	New Jersey			www.anlusa.com	Ari Ariyawansa at dillan@anlusa.com	
Lava Trading, LLC	Retail / Wholesale	83, Suite 8369	7,589	35/0 lost	moved to 95 Morton Street, NY, NY 10014	Valley	8,000		www.lavatrading.com	James Paddon at jpaddon@lavatrading.com	tel (917) 576-1114 and (212) 609-0100
Lehman Brothers Private Client Services / Holdings Inc	Finance	38-40 (and WFC 3)	45,100 (also in WFC 3)	618/1 lost	leased 70 Hudson Ave., Jersey City, NJ 07302 (Datek building), 399 Park Ave. fls. 5-6, 8-9, 11, 15-16, NY, NY 10022 (15-yr lease), and 85 10th Ave., NY, NY 10011; purchased Morgan Stanley's office tower at 745 7th Avenue	New Jersey, Midtown and Valley	Hudson Ave: 150,000; Park Ave.: 450,000; 10th Ave.: 56,000; 7th Ave.: 1,000,000		www.lehman.com		tel (201) 524-2000 and 888-534-6268
LG Securities America, Inc.	Investments	84, Suite 8463	1,800	9/0 lost	moved to 120 West 45th Street, NY, NY 10036	Midtown					Janelle Chang at tel (201) 816-2225
Li Yang	N/A	52, Suite 5215			temp. moved to 225 Varick St, 5th floor, - PO Box 426, NY, NY 10014-9998	Valley	500			lyang@abanet.org	tel (212) 807-6686 and (917) 202-5806, fax (212) 337-0249
Linea LLP	N/A	22, Suite 2221			moved to 246 West 106th Street, Suite 5E, NY, NY 10025	Upper West Side			www.lineawolfe.com	Lisa Vangelas at lisa@lineawolfe.com	
Lower Manhattan Cultural Council	Design	92 - studio (and WTC 5 - office)	4,467	?/1 lost	temp. moved to 145 Hudson Street, Suite 801, NY, NY 10013	Downtown	4,000		www.lmcc.com	lowermanhattanculturalcouncil@hotmail.com and Tricia Mire at triciamire@hotmail.com	tel (212) 219-9401, fax (212) 219-2058
Lucio Caputo	N/A	78, Suite 7885			moved to 160 East 65th Street, Apt. 2C, NY, NY 10021	Upper East Side					
Mahamud Hamadani	N/A	92, Suite 9205			moved to 511 6th Ave., Suite 214, NY, NY 10011	Valley				Mahamud Hamadani at mah1000@msn.com	
Majestic Star Inc Yacht Chartering / Majestic Star Voyages	Personal Services	89, Suite 8901			moved to 373 Park Ave., 7th floor, NY, NY 10016	Midtown			www.starofamerica.baweb.com	Shirley Dreifus at sdreifus@aol.com	in WTC: tel (212) 786-1225
Maria J Petti	Law				moved to 3 Times Sq, NY, NY 10036	Midtown					tel (212) 310-4647
Market Technicians Association	Investments	44, Suite 4447		2/0 lost	moved to 74 Main Street, 3rd floor, Woodbridge, NJ 07095	New Jersey			www.mta-usa.org and www.mta.org	shelley@mta.org	tel (732) 596-9399, fax (732) 596-9392
Marsh & McLennan USA / MMC / Marsh USA	Insurance	93-100	361,000	1900/295 lost	leased space at 1166 Ave. of the Americas, NY, NY 10036 (in progress before 9/11) and Hoboken, NJ	Midtown and New Jersey	Ave. of the Americas: 121,000; Hoboken, NJ: 237,945	Hoboken, NJ: ca. 2,000	www.marsh.com		tel (212) 345-6000 and 888-374-6377 (for property concerns: tel 212-345-8514), fax (212) 345-4808
Martin Progressive LLC	Computer Services	77, Suite 7733	13,789	80/0 lost	moved to 235 Park Avenue South, NY, NY 10003	Valley	13,000		www.martinprogressive.com		tel (212) 905-8911, fax (212) 905-8977
Marvin A. Katz, CPA	Accounting	45, Suite 4515	400		moved to 360 East 72nd Street, Apt B-308, NY, NY 10021	Upper East Side					
Maxine Blake	Law				temp. moved to 538 Broad Hollow Road, Melville, NY 11747	Suffolk					tel (631) 391-7800
May Davis Group	Investments	87, Suite 8735	12,824	?/1 lost	temp. moved to 120 Broadway, 28th floor, NY, NY 10006	Downtown	12,000		www.maydavis.com		tel 1-800-736-6474 and (212) 4178118
Mayer & Lee PC	Accounting	46, Suite 4653	882		moved to 17 Battery Place, Suite 1229, NY, NY 10004	Downtown					
Meganet Management Consultants, Inc.	Computer Services	46	600	0 lost	may have moved to 4 East 46th Street, Suite 504, NY, NY 10017	Midtown			www.meganet.com?		tel (212) 286-8400, fax (212) 286-8444
Metropolitan Life Insurance Co.	Insurance	98	7,119	52/2 lost	moved to 1 Madison Avenue, NY, NY 10010; according to NJDOT, MLI is planning to consolidate several offices in a former factory building near Queensboro Bridge, NY	Valley and Queens	Queens: 404,000		www.metlife.com	info@metlife.com	Holly at tel 1-800-638-5433
Michael Phillips	Law				moved to 25 Main Street, Hackensack, NJ 07601	New Jersey					tel (201) 342-4141, fax (201) 342-0612
Minas Shoe Repair	Personal Services	551 CNCR			moved to 2101 46th Street, Astoria, NY 11105	Queens					
MIS Service Co.	N/A	33, Suite 3391	2,000		moved to 1688 Broadway, NY, NY 10019	Midtown				Paul Andre at pandre@palm.net	

1 World Trade Center - North Tower

Tenant	Industry	Floor	Square Feet Leased	Employees	Status	Destination	New Square Footage	New Employment	Website	Email	Phone / Fax
MJ Bruderman Inc.	N/A	11, Suite 1153 and 79, Suite 7957			moved to 90 Main Street, Suite 226, Port Washington, NY 11050	Nassau			www.mjbc.com	Matthew Bruderman at matt@mjbc.com	
Morphia	N/A	79, Suite 7967	792		moved to 2522 E 19th Street, NY, NY	Valley			www.morphia.com	Igor Rozenblyum at irozen@morphia.com	
MSI Property (USA)	N/A				moved to 101 E. 52nd Street, 2nd floor, NY, NY 10022	Midtown					Keiichi Kondo at tel (212) 521-8380
M Solazzo Trading	Commodities	46, Suite 4683			moved to 35 Eastern Drive, Kendell Park, NJ 08824	New Jersey				Charlie Chan at cpachan35@aol.com	
Mutual International Forwarding	Transportation	89, Suite 8967	1,200	9	moved to 10 E. 40th Street, Suite 2902, NY, NY 10016 (3-year lease)	Midtown	2,500	9			Albert Cohen at tel (917) 714-9071
Muzy Nensey Catering	Restaurant				moved to 110 William Street, NY, NY 10038	Downtown					
Nabillus Securities	Investments	84, Suite 8403			no new address given	N/A				Michael Conroy at disvac5@aol.com	
Naomi Ben Shahar Photography	Personal Services	9			moved to 217 West 11th Street, Suite 4B, NY, NY 10014	Valley				Naomi Shahar at naomib@thing.net	
Natural Nydegger Transport Corp.	Transportation	53, Suite 5345	3,500	22/0 lost	moved to 135 W. 36th Street, 6th floor, NY, NY 10018	Midtown	1,750		www.nntc.com	global@nntc.com	Christopher Ursprung at tel (646) 278-1710, fax (646) 278-1759
Nature Bar Health Foods, Inc. / Cornucopia	Restaurant	CNCR			moved to 350 Albany St., Suite 12C, NY, NY 10280	Downtown					
Netbit Electronics Inc.	Technology	81, Suite 8121			moved to 565 Seton Circle, Brooklyn, NY 11219; may be contacted at London office: 149 Albion Road, London N16 9JU	Brooklyn			www.netbit-electronics.com	info@netbit-electronics.com	in WTC: tel (732) 367-6764, fax (732) 367-6799; in London: tel 44 207 690 0042, fax 44 207 690 0043
Network Plus Corporation	Communications	81, Suite 8121	8,500	46/0 lost	moved to 601 W. 26th Street, NY, NY 10001	Valley		40	www.np1.com		tel 1-800-552-5254, 1-888-786-4099 and (631) 847-7890
New Continental Enterprises	Transportation	81, Suite 8129	2,055		may be reached at PO Box 297, Flagtown, NJ 08821	New Jersey				Suzy Guo at rytrading@aol.com	
New-ey International Corp.	Personal Services	77, Suite 7711	894		moved to 309 Fifth Avenue, Suite 300, NY, NY 10016	Midtown			www.new-ey.com		Esin Eyilik at tel (212) 448-0616
New York Metropolitan Transportation Council	Government	82	17,345	58/3 lost	temp. moved to 45-46 21st Street, Long Island City, NY 11101	Queens			www.nymtc.org		tel (718) 482-4559
New York Society of Security Analysts	Government	44, Suite 4447	3,000	20/0 lost	moved to 1608 Broadway, 11th fl., NY, NY 10019 (2-4 year lease)	Midtown		20	www.nyssa.org	staff@nyssa.org	Laura Layr at tel (212) 541-4530 and 1-800-248-0108, fax (212) 541-4677
Next Logix Inc.	N/A	46, Suite 4697			moved to 55 Princeton Highstown Road, Suite 2038, Princeton Junction, NJ 08550	New Jersey				Sanjay Phanse at sanjay@qbsgord.com	
Nikko Securities / Nikko Cordial Corporation	Investments	79, Suite 7923	9,340	20/5 lost	moved to 535 Madison Ave., NY, NY 10022	Midtown	13,000	25	www.nikko.co.jp and www.nikko.com	Joseph Mendola at mendola_joseph@nikko.com	tel (212) 599-0300, fax (212) 599-4640
Noah Klarish & Associates PC	Law		1,000	1	moved to 40 West 57th Street, 30th Floor, NY, NY 10019	Midtown	700	1	www.klarishlaw.com	Noah Klarish at noah@klarishlaw.com	tel (212) 603-2326
Noga Commodities Overseas, Inc.	Investments	80, Suite 8041	6,518	9/0 lost	moved to 41 West 56th Street, 2nd floor, NY, NY 10019	Midtown				noga80@aol.com	
Northeastern Capital Funding LLC	Investments	45, Suite 4521 and 79, Suite 7967	899		moved to 1623 3rd Ave., Suite 36 J, NY, NY 10128	Upper East Side			www.necf.net	John Cevallos at johnc@necf.net	in WTC: tel 800-931-8109, fax (212) 432-7259
O	N/A	77, Suite 7711			moved to 401 East 34th Street, Suite 15A, NY, NY 10016	Midtown					
Ohrenstein & Brown LLP	Law	85, Suite 8515	33,067	2 lost	moved to 1 Penn Plaza, NY, NY 10119 (10-year lease)	Valley	20,000	60			tel (516) 873-6334, fax (516) 873-8912
Okasan Securities / Okasan International America Inc.	Investments	87, Suite 8727	2,250		no new address given	N/A			www.okasan.co.jp		
Okato Shoji Company, Ltd.	Computer Services	79, Suite 7927	2,729		may be contacted at headquarters: 2-12-16 Shinkawa, Chuo-ku, Tokyo 104, Japan	N/A			www.okato.co.jp/english	okato-ny-rep@worldnet.att.net	in WTC: tel (212) 488-6846, fax (212) 488-2185; in Tokyo: tel 03 3552 1363, fax 03 3552 4659
Open Systems Interface Solutions	Computer Services	22, Suite 2281			moved to 55-412 River Drive S., Jersey City, NJ 07310	New Jersey					Kevin Chen at tel (201) 993-6000
Overseas Union Bank, Ltd.	Finance	39, Suite 3955	3,750	13/0 lost	no new address given	N/A					tel (213) 624-3187
Pacific American Corporation	Retail / Wholesale	47, Suite 4789 and 49, Suite 4987	4,753		moved to 110 Plaza, Suite 4501, NY, NY 10119	Valley				Yvonne Yun at yvonnepac@yahoo.com	

1 World Trade Center - North Tower

Tenant	Industry	Floor	Square Feet Leased	Employees	Status	Destination	New Square Footage	New Employment	Website	Email	Phone / Fax
Pacrim Trading & Shipping, Inc.	Transportation	53, Suite 5347	1,423	5	moved to 333 Sylvan Ave., Suite 210, Englewood, NJ 07632	New Jersey		3	www.pacrimtrading.net	Getian Wang at pacrim@prodiqy.net	tel (201) 227-8868, fax (201) 227-8898
PASS Consulting Corp	Consulting	90, Suite 9069	4,711	3/0 lost	moved employees to 3 East 28th Street, 9th floor, NY, NY 10016 and 5301 Blue Lagoon Drive, Suite 490, Miami, FL 33126 (existing office)	Midtown and Florida			www.pass-consulting.com	Anne Marie Route at anne.route@pass-consulting.com	in Miami: tel (305) 269-6975, fax (305) 264-6575
Patrick C. Crilley	Law	52, Suite 5267	1,000	1	moved to 233 Broadway, NY, NY 10007	Downtown	750	1			tel (212) 775-8102
Pinnacle Towers Inc.	Business Services		small		may be reached at 301 North Cattlemen Road, Sarasota, FL 34232	Florida					Ben Gaboury at tel (888) 748-3482
Porcella Vicini & Company	Transportation	11, Suite 1151	2,200		moved to 130 Williams Street, Suite 605, NY, NY 10038	Downtown				Martin Sosa at Porvico@aol.com	
Port Authority of New York & New Jersey	Government	3,14,19,24,28,31, Suite 67W	800,000	3,000/75 lost	temp. moved to 1 Riverfront Ctr., Newark, NJ 07102; leased space at 225 Park Ave South, fls. 9-15 and 18-20 (15 years), 233 Park Ave., Gateway Center, Newark, NJ, 1 Journal Square, Jersey City, NJ 07302, and Tech Center, Erie St., Jersey City, NJ 07302	Midtown and New Jersey	Riverfront Center, Newark: 180,000; 225 Park: 224,728; 233 Park: 80,898; Gateway Center, Newark: 200,000	Jersey City: 1130	www.panynj.gov		tel (973) 623-9105 and Geneva Graham at (201) 239-3646, fax (973) 623-3513;
Primark Decision Economics	Business Services	11, Suite 1109	4,954	14	moved to 530 Fifth Ave, 7th floor, NY, NY 10036	Midtown	6,000	18	www.primark.com		tel (212) 884-9440, fax (212) 884-9451/9452
Prospect International, Inc.	N/A	46	966	?/0 lost	no new address given	N/A			www.prospectinternational.com		
Pure Energy Corp.	Retail / Wholesale	45, Suite 4573 and 53, Suite 5301	5,935	5/0 lost	moved to Paramus, NJ (5-year lease)	New Jersey	2,600	2	www.pure-energy.com	Scott Dunlop at sdunlop@pure-energy.com	Scott Dunlop at tel (949) 888-8560, fax (949) 888-8562
P. Wolfe Consultants	Business Services / Architecture	22, Suite 2221	2,165	10	moved to 291 Broadway, Suite 1807, NY, NY 10007	Downtown	2,800	15	www.pwolfe.com	Peter Lupassakis at peter@pwolfe.com	tel 1-800-540-7024, (212) 938-8000 and Mila Goldman at (917) 549-7402, fax (212) 938-8008
Pro Flora	Retail / Wholesale	455 CNCR			no new address given	N/A			www.proflora.com		
Quantum Business Solutions / ATL	Computer Services	46, Suite 4697 or 78, Suite 7827		4/0 lost	moved to University Research Park, P.O. Box 57100, Irvine, CA 92619	California				Sanjay Phanse at sphanse@prodiqy.net	Camille Moet at tel (949) 856-7800
Quint Amasis, LLC.	Personal Services	47, Suite 4763	1,000		moved to 10 East 21st Street, Suite 600, NY, NY 10010	Valley			www.quintamasis.com	Bruno Dellinger at bdellinger@quintamasis.com	tel (212) 839-0580
Rainbow Sound Inc.	Retail / Wholesale				no new address given	N/A			www.rainbowsoundinc.com	wayne@rainbowsoundinc.com	tel (631) 752-8869, fax (631) 752-8874
RealCom Financial Partners LLC	Investments	79, Suite 7967			moved to 1330 Ave. of the Americas, 25th floor, NY, NY 10019	Midtown					
Regional Alliance for Small Contractors	Business Services	21, Suite 2135 and 38, Suite 3853	1,692	8/0 lost	moved to West 42nd Street, NY, NY 10036	Midtown	1,700		www.regional-alliance.org	E-Mail: rascnj@earthlink.net	tel (609) 392-5600 and (973) 681-2296, fax (609) 392-7092
RGL Gallagher PC Accountants	Accounting	52, Suite 5265	984	2/0 lost	operating out of another NYC office	New York					R. Steve Tinsley at tel (615) 231-6722
Rice Financial Products Co	Investments	52, Suite 5201	3,878		moved to 770 Broadway, NY, NY 10003	Valley					
Richard A. Zimmerman, Esq.	Law	52, Suite 5267	1,293	2/0 lost	moved to 233 Broadway, NY, NY 10007	Downtown	750	2			tel (212) 321-3240, fax (240) 218-6456
Riva Cards	Retail	130 CNCR			no new address given	N/A				Susan Rochalis at srochlis@aol.com	
RLI Insurance Company	Insurance	80, Suite 8023	3,900	7/0 lost	moved to headquarters at 9025 N. Lindbergh Drive, Peoria, IL 61615	Illinois		7	www.rlicorp.com		Skip Orza at tel (309) 692-1000, fax (309) 692-1068
Rohde & Liesenfeld, Inc.	Transportation	32, Suite 3269 and 3271	5,000	28/2 lost	moved to 535 8th Ave., NY, NY 10018	Midtown	6,000		www.roli.com	nn@roli.com and Gulay Maffia at nx@roli.com	tel (888) 800-5490 and (212) 432-1200, fax (212) 432-1426 and (718) 917-8251
Roman V Popik, Law Offices	Law	21, Suite 2111	586		moved to 1500 Broadway, Suite 2013, NY, NY 10036	Midtown				Roman Popik at vladima_99@yahoo.com	tel (646) 562-2207, fax (646) 562-2208
Royal Thai Embassy Office / Tourism Authority of Thailand / Government of Thailand Trade Promotion Office	Government	37, Suite 3729	5,109	16/0 lost	most employees relocated to the Royal Thai Consulate-General, 351 East 52nd Street, NY, NY 10022; looking for permanent space in Manhattan	Midtown			www.thaiembdc.org	thainycg@aol.com and Audsitti Sroithong at boiny@aol.com	tel (212) 754-1770, fax (212) 754-1907
R.S. Properties	N/A		small		moved to 110-56 67th Road, Forest Hills, NY 11375	Queens					Rolen Sabet at tel (718) 268-8255

1 World Trade Center - North Tower

Tenant	Industry	Floor	Square Feet Leased	Employees	Status	Destination	New Square Footage	New Employment	Website	Email	Phone / Fax
RY Trading USA Inc.	Wholesale	81, Suite 8129			moved to 43-35 Union Street, Suite 5E, Flushing, NY, 11355	Queens				Guoqing Xing at nytrading@aol.com	
San-In Godo Bank Ltd.	Finance	84, Suite 8403	2,000	15/0 lost	temp. moved to the NY office of Sumitomo Mitsui Bank, which may be located at 200 Park Ave., 36th floor, NY, NY 10166	Midtown					tel? (212) 878-4000, fax? (212) 878-4800
Securant Technologies / RSA Security	Computer Services	79	2,729		may have moved to MA headquarters at 174 Middlesex Turnpike, Bedford, MA 01730	Massachusetts?			www.rsasecurity.com		in MA: tel (781) 515-5000, fax (781) 515-5010
Securion Corporation	N/A	46, Suite 4691			no new address given	N/A			www.securion.com		
Security Traders Association, Inc.	Personal Services	45, Suite 4511	1,520	3/0 lost	moved to 420 Lexington Avenue, Suite 2334, New York, NY 10170	Midtown	24,000		www.securitytraders.org	John Giesea at jcg44@home.com	tel (212) 867-7002, fax (212) 867-7030
Serko & Simon	Law	33, Suite 3371	8,605	22/0 lost	sharing office space with Baker & Hostetler LLP at 666 Fifth Avenue, 16th floor, New York, NY 10103	Midtown			www.customs-law.com	serko-simon@customs-law.com	tel (646) 469-1670, fax (646) 469-1689
Shape Graphics	Art	46			moved to 1781 East 17th Street, Apt. D4, Brooklyn, NY 11229	Brooklyn					
Shizuoka Bank Ltd.	Finance	80, Suite 8025	2,200	10/0 lost	no new address given	N/A			www.shizuokabank.co.jp		
Sidley Austin Brown Wood LLC	Law	54, 56-59	223,100	600/1 lost	temp. moved to 875 3rd Ave, NY, NY 10022; signed lease at 787 Seventh Ave for floors 16-26, expects to move in summer 2002	Midtown	3rd Ave: 53,000; 7th Ave: 338,926		www.sidley.com/offices/newyork.asp		tel (212) 906-2000, fax (212) 906-2021
Sino Lion USA Ltd.	N/A	22, Suite 2273	694		moved to 11 Jhan Drive, Jackson, NJ 08527	New Jersey			www.sinolion.com	Evelyn Su at egsu@sinolion.com	
Sinopec USA, Inc.	Retail / Wholesale	27, Suite 2775 and 46, Suite 4655	4,584	7/0 lost	may be reached at headquarters: No. A6 Hui xin East St., Chaoyang District, Beijing, China 100029	N/A			www.sinopec.com/english		
Siyo Consulting Group	Consulting				moved to 203 West 98th Street, Apt 9D, NY, NY 10025	Upper West Side			www.siyo.com	Richard Ottoo at rottoo@siyo.com	
Smart Analyst	Investments	93, Suite 9333			moved to 43 W 23rd Street, 8th floor, NY, NY 10010	Valley			www.smartanalyst.com		tel (212) 331-0010, fax (212) 633-8729
SMW Trading Corp.	Investments	85, Suite 8571	3,000	0 lost	moved to the NYMEX Building, One North End Avenue, NY, NY 10282	Downtown			www.smwtrading.com		tel (312) 913-6100
S.O.S. Communications / Security Our Specialty Inc.	Communications	89, Suite 8911			moved to 1273 36th St., Brooklyn, NY 11218; may be reached at PO Box 190-679, Brooklyn, NY 11219	Brooklyn				Joe Kohnfelder at jayfreind@aol.com	
Spin Systems	N/A	45, Suite 4547			no new address given	N/A			www.spinsystems.com		
Spotlight Media	Telecommunications	24, Suite 2420			moved to 301 East 69th Street, Apt 10A, NY, NY 10021	Upper East Side					
SRA America	Computer Services	45, Suite 4539	1,000	0 lost	moved to 1 Penn Plaza, Suite 3424, NY, NY 10119	Valley				Rich Romanik at rich@sraamerica.com	tel (212) 244-8833, fax (212) 744-1933
Sri Lankan Travel Inc.	Travel Agency	46, Suite 4667			moved to MetroTop Plaza, 111 Wood Ave. South, Iselin, NJ 08830	New Jersey			www.sltusa.com	Dillan Ariyawansa at dillan@sltusa.com	
Statcom Communications Corp.	Communications			0 (transmitter and storage)	moved to 1324 Forest Ave., Staten Island, NY 10302	Staten Island			www.statcomcorp.com	staff@statcomcorp.com	tel (718) 448-4040, fax (718) 447-6171
Strategic Communications, Inc.	Communications	89, Suite 8909	2,400		moved to 373 Park Ave., 7th floor, NY, NY 10016	Midtown			www.scgnyc.com	Ali Farhan at fali@scgnyc.com	
Strawberry	Retail / Wholesale	CNCR	7,106		has various other NYC locations	New York					
Streamline Capital, LLC	Investments	45, Suites 4549, 4553, 4561 and 83, Suite 8365	2,024		moved to 95 Morton Street, NY, NY 10014	Valley				Keith Chutjian at keith_pc@hotmail.com	
Strongin Rothman & Abrams LLP	Law	79, Suite 7967	4,500	7	moved to 50 Broadway, Suite 2003, NY, NY 10004	Downtown	5,500	9	www.sralawfirm.com	Howard Strongin at hstrongin@sralawfirm.com	tel (212) 931-8313
Stryker Tams & Dill LLP	Law				temp. moved to 2 Penn Plaza E, Newark, NJ 07105	New Jersey					tel (973) 491-9500, fax (973) 491-9692
Suggested Open Systems, Inc.	Computer Services	46, Suite 4633	600	4/0 lost	moved to 225 Varick Street, 5th Floor, NY, NY 10014	Valley		4			

1 World Trade Center - North Tower

Tenant	Industry	Floor	Square Feet Leased	Employees	Status	Destination	New Square Footage	New Employment	Website	Email	Phone / Fax
Suntendy America, Inc.	Retail / Wholesale	46, Suite 4643	1,000	0 lost	moved to 23rd between 5th and 6th Aves., NY, NY 10010	Valley	750		www.suntendyusa.com	cstar@suntendyusa.com	tel (212) 391-9618, fax (212) 391-9613
Super Runners Shop WTC, Inc.	Retail	355 CNCR			moved to 355 New York Ave., Huntington, NY 11743	Suffolk					
Sylvia Beckey	Law	46, Suite 4601			moved c/o Re Parser & Partners, 445 Park Ave., NY, NY 10022	Midtown					
Sysoft e-Business Lab	Computer Services	22, Suite 2265	1,781		moved to 100 Wood Avenue South, Suite 111, Iselin, NJ 08830	New Jersey			www.sysoft.com		
T&T Enterprises International, Inc.	Investments	46, Suite 4669	1,006	3/1 lost	moved to 38th and 8th Ave., NY, NY 10018; may be reached at 69-60 108th Street, Forest Hills, NY 11375	Midtown		2		Hongmei Tao at citc1wtc@aol.com	tel (718) 520-8307
Tadasu Tokumaru, M.D.	Health Care	21, Suite 2151	520	3/0 lost	moved to Fort Lee, NJ	New Jersey					
Tai Fook Securities	Investments	22, Suite 2247 and 39, Suite 3915	1,500	3/0 lost	has gone out of business	N/A			www.taifook.com/english		Paul Ehrenstein at tel (212) 509-7800
Taipei Bank	Finance	83, Suite 8327	12,111	15/0 lost	moved to 675 Third Avenue, 4th floor, Suite 400, New York, NY 10017	Midtown	3,000	15	www.taipeibank.com.tw/english	tpbkny@aol.com	tel (212) 599-1860, fax (212) 599-1861
Tamb International	Investments	79			may have moved to MA headquarters: 390 Main Street, Worcester, MA 01615	Massachusetts?			www.tamb-forex.com	Rouslan Tambiev at rt@tamb-forex.com	in MA: tel (509) 797-9399, fax (509) 792-5055
Temenos USA, Inc.	Retail / Wholesale	52 and 84, Suite 8465	8,301	70/0 lost	moved to 112 Madison Ave., 9th floor, NY, NY 10016 and 410 Park Avenue, NY, NY 10022	Midtown	Madison Ave.: 7,500; Park Ave.: 5,000	60 (total)	www.temenos.com	Nyoffice@temenos.com	tel 1-800-464-8555
Thai Farmers Bank	Finance	78, Suite 7811	4,512	2/0 lost	moved to 27 Sapphire Drive, West Windsor, NJ 08550	New Jersey			www.tfb.co.th	farmersny@aol.com	tel (609) 213-2387, fax (609) 275-6510
Thai Trade Center	Commodities				moved c/o the Thai Board of Investment, 351 E. 52nd Street, NY, NY 10022	Midtown				Andy Tankimyoung at boiny@aol.com	
The Beast.Com / Castlenet LLC	Computer Services	33, Suite 3357 and 80, Suite 8067	21,000	62/0 lost	moved to 404 5th Ave., NY, NY 10016	Midtown	20,000		www.thebeast.com		Lee Ohliger at tel (212) 354-2837
The Chugoku Bank, Ltd.	Finance	90, Suite 9007	1,500		moved to 666 Fifth Ave., NY, NY 10103	Midtown			www.chugin.co.jp		
The Cultural Institutions Retirement Systems	Finance		5,416		moved to 853 Broadway, NY, NY 10003	Valley					
The Nishi-Nippon Bank, Ltd.	Finance	102	10,325	2 lost	closed its NY office; relocated to Tokyo	Japan					
The SCPIE Companies	Insurance	22, Suite 2269	2,582	3/0 lost	moved c/o RMG, 2nd fl. Atrium, 47 Maple St., Summit, NJ 07901	New Jersey			www.scpie.com		tel 1-800-962-5549
The Williams Capital Group	Investments	52, Suite 5293	578	50 (divided between NY and London)/0 lost	moved to 650 Fifth Avenue, 10th floor, New York, NY 10019	Midtown			www.wilcap.com		Gregory Mullen at tel (212) 830-4500, fax (212) 830-4545
Thermo Electron	Technology	85, Suite 8563	2,289	8/0 lost	may have moved to MA headquarters: 81 Wyman Street, Waltham, MA 02454-9046	Massachusetts?			www.thermo.com		tel 1-800-678-5599
ThinkPath	Business Services	78	1,214	7/0 lost	moved to 195 Broadway, NY, NY 10007	Downtown	1,200	5	www.thinkpath.com	newyork@thinkpath.com and Mary Anne Lepa at mlepa@thinkpath.com	tel (212) 566-4223 and (732) 267-4849, fax (732) 286-9991
Thor Technologies	Computer Services	87, Suite 8707	10,963	42/0 lost	moved to 445 Park Ave., 10th floor, NY, NY 10022 (6-month lease); will move to 45 Broadway, NY, NY 10002	Downtown	Park Ave.: 4,000	42	www.thortech.com	info@thortech.com and John Lump at john.lump@thortech.com	tel (917) 322-2133, fax (917) 322-2150
Tower Computer Services, Inc.	Retail / Wholesale	21, Suite 2141 and 29	585		moved to 1399 Carroll Street, Brooklyn, NY 11213	Brooklyn				Mendel Ciment at mcim@bellatlantic.net	tel (212) 432-1041
Tradellion Inc.	N/A	45, Suite 4577			moved to 67 Wall Street, Suite 2211, NY, NY 10005	Downtown			www.tradellion.com	Barry Burns at bburns@tradellion.com	tel (212) 709-8280, fax (212) 943-2300
TradeWeb LLC	Investments	51, Suite 5149	50,000	82/0 lost	moved to Harborside Financial Center Plaza 5, Jersey City, NJ (15-year lease)	New Jersey	35,900	86	www.tradeweb.com		tel 1-800-541-2268
Trading Technologies Inc	Computer Services	86, Suite 8625	9,548	7/0 lost	moved to 1 Penn Plaza, Suite 2522-25, NY, NY 10119	Valley			www.tradingtechnologies.com		tel (212) 353-5300 and (847) 424-8844, fax (212) 353-5324
Travelcom Inc.	Consulting	46, Suite 4603		0 lost	moved to 75 S. Broadway, 4th floor, White Plains, NY 10601	Westchester			www.travelcominc.com	Robin Back at rback@travelcominc.com	tel (914) 304-4321, fax (914) 304-4323
Triple Hop Technologies	Technology	53	5,462		moved to 45 West 25th Street, 9th floor, NY, NY 10010	Valley			www.triplehop.com	contact@triplehop.com	tel (212) 243-4645, fax (212) 243-4660

1 World Trade Center - North Tower

Tenant	Industry	Floor	Square Feet Leased	Employees	Status	Destination	New Square Footage	New Employment	Website	Email	Phone / Fax
Tsunami Computing Inc.	Computer Services	46, Suite 4691	508		no new address given	N/A			www.hugewave.com		
Turner Construction Company	Construction	38, Suite 3871	1,000	0 lost	moved to The Turner Corporation, 375 Hudson Street, NY, NY 10014	Valley			www.turnerconstruction.com	turner@TCCO.com	tel (212) 229-6000, fax (212) 229-6390
UIT / VIG	Publishing				moved to Grand Central Terminal, NY, NY 10016; may be contacted at 107-40 Queens Blvd, Rm 6M, Queens, NY 11375	Midtown	1,000				Rachelle Lin at tel (917) 853-9257
Unifacmanu International Trading Co. Ltd.	Wholesale	52, Suite 5291	679		moved to 420 Lexington Avenue, Suite 529, New York, NY 10170	Midtown					Rachelle Lin at tel (212) 949-2442
United Aline Co.	N/A	46, Suite 4635		0 lost	moved to 207-08 42nd Ave, Bayside, NY 11361	Queens			www.united-aline.com	Harry Hou at info@united-aline.com	tel (718) 357-6799, fax (718) 357-4599
United Hercules Inc.	Transportation	21, Suite 2113	10,000		may be contacted at 300 Rector Place, Apt. 7H, NY, NY 10280	Downtown				George Liu at uhi@att.net	
United Seamen's Service / American Merchant Marine Library Association	Non-profit	21, Suite 2161	2,400	5	moved to 20 Exchange Place, Suite 2901, NY, NY 10005	Downtown			www.uss-ammla.com	ussammla@ix.netcom.com	in WTC: tel (212) 775-1038
Universal Communication	Communications	89, Suite 8911			moved c/o S.O.S. Communications, 1273 36th St., Brooklyn, NY 11218	Brooklyn				Joe Kohnfelder at soscomm@aol.com	
Valley Forge Securities, Inc. / Weldington Co.	Investments				moved to 125 Maiden Lane, NY, NY 10038	Downtown					Robert Montani at tel (610) 527-7200
Vanadium Inc. / Drift Board Wear LLC	Retail / Wholesale	11, Suite 1153			moved to 8 Have Ave., Suite 226, Port Washington, NY 11050	Nassau			www.mjbc.com	Ronald Lehman at lehman@mjbc.com	
Vengo	N/A				moved to 295 Greenwich Street, NY, NY 10007	Downtown			www.vengo.com	Taku Mishimae at taku@vengo.com	
Wai Gao Qiao USA, Inc. / Pudong Fitz. USA Inc.	Business Services	89, Suite 8929	1,528		moved to 21 East 33rd Street, 2nd floor, NY, NY 10016	Midtown				Bill Tan at billztan@yahoo.com	
Wall Street Planning Association	N/A	89, Suite 8935	2,154		moved to 48 Wall Street, 5th floor, NY, NY 10005 (10-year lease)	Downtown	13,650				
Wall Street Realty Capital Inc.	Investments	33, Suite 3357	1,713	4	moved to 90 John Street, Suite 401, NY, NY 10038	Downtown		6	www.wallstreetrealty.com	Anthony LaBozzetta at alabozzetta@wallstreetrealty.com	
Webadviso	N/A	23			moved to 61 Broadway, Suite 1000, Brooklyn, NY 11236	Brooklyn					
Weirong Lin	Law				moved to 33 Charles St., Jersey City, NJ 07307	New Jersey					tel (201) 459-0889, fax (201) 459-0605
Weldler & Mayer CPA PC / Mayer & Lee	Accounting				moved to 17 Battery Place, Suite 1229, NY, NY 10004	Downtown				Susan Lee at susansclee@aol.com	
Welton International Trading Company Ltd. / Welton Shipping Co.	Wholesale	46, Suite 4635			moved to 207-08 42nd Ave, Bayside, NY 11361	Queens					
William M Kamen	Law				temp. moved to 41 W 56th St, NY, NY 10019	Midtown					tel (212) 397-8166
Windows on the World / Night Sky Holdings / Wild Blue	Restaurant	106	40,025	300/75 employees and 180 conference attendees lost	temp. located c/o David Berdon and Co. LLP, 415 Madison Avenue, New York, NY 10017	Midtown			www.windowsontheworld.com		tel (212) 832-0401 ext.# 612, 1-800-226-5170 and 1-877-226-5170, fax (646) 497-0889
Wofex, Inc.	N/A	77, Suite 7701			no new address given	N/A			www.wofex.com	Michael Conroy at disvac5@aol.com	Richard Kelly at kelly@wofex.com
World Trade Centers Association	Personal Services	77	9,105	1 lost	moved to 60 East 42nd Street, Suite 1901, NY, NY 10165	Midtown	6,276		www.wtca.org		tel (212) 599-3444, fax (212) 599-1950
World Trade Club	N/A	55	13,333		has not announced plans for relocation	N/A					
World Trade Institute of Pace University	Education	29	45,943	0 lost	temp. operating from 19 West 44th Street; signed a lease for 3 floors at 161 William Street, ny, ny 10038, will occupy from Fall 2002	Downtown	William Street: 40,900		www.pace.edu	Donna Sharp at dsharp@pace.edu and wti@pace.edu	tel (877) 825-8664, (212) 346-1200 and 346-1199
World Travel	Transportation	3	25,000		relocated to existing offices at 1120 Ave. of the Americas, NY, NY 10036	Midtown					
WR Hambrecht	Investments	39, Suite 3911	11,491	20/0 lost	moved to 126 Fifth Avenue, 4th floor, NY, NY 10011	Valley			www.wrhambrecht.com		tel (212) 549-3280, fax (212) 549-3385
Xcel Federal Credit Union	Finance	39	4,200	0 lost	moved to 26 Federal Plaza, Room 1702, New York, NY 10278	Downtown			www.xcelfcu.org		tel 1-800-284-8663, fax (212) 406-0880
XCOM Technology Resources / XCOM LLC	Technology	90, Suite 9051			moved to 1416 York Avenue, Suite 3D, NY, NY 10021	Upper East Side			www.xcomusa.com	Donald MacIver at dmaciver@xcomusa.com	tel (212) 472-0249, fax (212) 288-9829

**1 World Trade Center - North
Tower**

Tenant	Industry	Floor	Square Feet Leased	Employees	Status	Destination	New Square Footage	New Employment	Website	Email	Phone / Fax
Yat Chau (USA) Inc.	N/A	45, Suite 4505			moved to 137-37A 41st Ave., Queens, NY	Queens					Bensen Ye at tel (718) 886-9519
Zedel Clearstream Banking	Finance	79			moved to 99 Park Avenue, 8th floor, NY, NY 10016	Midtown			www.clearstream.com		tel (212) 293-2300, fax (212) 293-2310
Zenna Consulting	Consulting	29, Suite, 2969			moved to 22 Barbara Street, Staten Island, NY 10306	Staten Island				Anthony Zenna at tonyzenna@aol.com	
Zim-American Israeli Shipping Company Ltd	Transportation	16	10,000		moved its headquarters in April 2001 to 5801 Lake Wright Drive Norfolk, VA 23502; a few employees are moving to 1000 South Ave., Staten Island, NY 10314	Virginia and Staten Island	Staten Island: 5,000		www.zim.co.il		tel 866-863-0852
Total Sq. Ft.			4,761,416								

2 World Trade Center - South Tower

Tenant	Industry	Floor	Square Feet Leased	Employees	Status	Destination	New Square Footage	New Employment	Website	Email	Phone / Fax
4 U Services Inc. / DBA Stellar Services	N/A	18, Suite 1844	595	25	moved to 156 5th Ave., Suite 1134, NY, NY 10010 (3-year lease)	Valley		28	www.stellar4.com	Yolanda Apiado at yapiado@stellar4.com	Liang Chen at tel (212) 432-2848, fax (212) 432-2846
7A's International	N/A	18, Suite 1888			moved to 454 Fort Washington Ave., Apt. 20B, New York, NY 10033	Harlem					Yumin Wang at tel (212) 568-5303
Abad, Castilla, and Mallonga	Law	18, Suite 1848	742		moved to the Empire State Building, 350 Fifth Ave., NY, NY 10118	Midtown	1,500				Jose Mallonga at tel (973) 715-1030
ABN-AMRO, Inc.	Finance	35 (and 2 WFC)	40,000	80/0 lost	temp. moved to 1290 Ave. of the Americas; plans to return to 2 WFC	Downtown			www.abnamro.com		
Abacadabra Digital Color of NY, LLC	Technology	18, Suites 1826 and 1854	1,826		moved to 1359 Littleton Road, Route 202, Morris Plains, NJ 07950	New Jersey				Gregory Carafello at kingocolor@aol.com	
Accro Lynch Corp.	N/A	15, Suite 1556	593		moved to 444 Washington Blvd., Suite 3332, Jersey City, NJ 07310	New Jersey				Paul Sung at sungpaul@aol.com	Paul Sung at tel (201) 216-0993
Ace Elevator Company Inc.	Technology	35			moved to 139 East Central Blvd., Palisades, NJ 07650	New Jersey					
Alexander Edwards Global Search / Alexander International	Business Services				moved to 501 Madison Ave., Room 401, NY, NY 10022	Midtown			www.alexanderedwards.com	info@alexanderedwards.com	tel (212) 593-4300 and 800-590-3001, fax (212) 593-4502
Allianz AG	Insurance	18 (and 1 Liberty Plaza)		300/0 lost (incl. 1 Liberty Plaza)	relocated to other Allianz offices	New York			www.allianz.com		tel 1-800-843-3863
All Products International Inc.	N/A	14, Suite 1484	191		no new address given	N/A				Ratnadip Borkhetaria at winonwall@aol.com	
Allstate Insurance Company	Insurance	24	1,000	5/0 lost	relocated to other Allstate offices	New York			www.allstate.com		
American McKinley Ventures Management Inc.	Investments	18, Suite 1882			moved to 65 Broadway, Suite 825, NY, NY 10006	Downtown					Chang Sheng Yu
Antal International, Inc.	Business Services	22	2,086		has not announced plans; may be reached at headquarters: 90 Tottenham Court Road, 2nd floor, London W1T 4AN	N/A			www.antal.com		in London: tel 44 20 7637 2001, fax 44 20 7637 0949
AON Corporation	Insurance	92 and 98-105	219,133	1,100/176 lost	leased space at 685 Third Ave, New York, NY 10017 (10-year lease), and 55 East 52nd St., NY, NY 10022	Midtown	3rd Ave: 250,000; 52nd St: 270,000	3rd Ave: 509; 52nd Street: 800	www.aon.com		Kathy at tel (212) 792-9200 and (866) 256-4154
Aramark	Concessions	CNCR (also WTC 1 and WTC 7)		7 lost (total)	no new address given, but plans to return to the site when rebuilt	Downtown			www.aramark.com		tel (215) 238-3000 and 1-800-934-4598 (employee info)
Atlantic Bank of New York	Finance	106	50,061		moved to 960 Ave. of the Americas, NY, NY 10001	Valley			www.abny.com		tel 1-800-435-1769, 1-800-593-4345, and (212) 967-7425
Baseline Financial	Computer Services	77-78	42,750	175/3 lost	moved to 395 Hudson St., NY, NY 10014	Valley	58,000	200		Fred Mahe at fred@lvcos.com	tel (215) 982-3930
Ben & Jerry's	Concessions	CNCR		12/0 lost	relocated to other NY locations	New York					
Bepaid.com	Computer Services	84, Suite 8427			no new address given	N/A			www.bepaid.com		
Bridge Information Systems Inc. / Reuters	Business Services	57-58	6,268		returned to WFC 3, NY, NY	Downtown			www.reuters.com and www.bridge.com		tel (212) 372-7100 and 1-800-927-2734, fax (212) 372-7115
Candia Shipping	Retail / Wholesale	15, Suite 1514	1,600	3	moved to 25 Ivy Street, Oster Bay, NY 11771	Nassau		2	www.candiashipping.gr	candia@ath.forthnet.gr	tel (212) 466-1510, fax (212) 466-1434
CareerEngine Network / Matthews & Wright	Personal Services	21, Suite 2112	7,183	13/0 lost	temp. moved to 200 West 57th Street, NY, NY 10019	Midtown	1,700	10	www.careerengine.com	info@careerengine.com or Fern Golub at fgolub@careerengine.net	tel (212) 488-8300, fax (212) 432-0475
Charoen Pokphand USA, Inc.	N/A	21, Suite 2158	2,000		may be contacted at 221 East Broad Street - P.O. BOX 1569, Eufaula, Alabama 36027	Alabama			www.cp-usa.com		in AL: tel (334) 616-7940, fax (334) 616-7971
Chen, Lin, Li, & Jiang, LLP	Finance	18, Suites 1830 1832	1,994	6	temp. moved to 41 Broadway, Suite 2303, New York, NY 10013	Downtown	1,750	5			Xiaomin Chen at tel (212) 343-9072, fax (212) 343-9817
China Chamber of Commerce, Inc.	Personal Services	24	882		moved to Chicago headquarters: 55 West Monroe Street, Suite 630, Chicago, IL 60603	Chicago			www.usccc.org	info@usccc.org	in IL: tel (312) 368-9911, fax (312) 368-9922
China International Trust & Investment	Investments	22	1,766		moved to 355 South End Ave., Apt 3K, NY, NY 10280	Downtown				Che Er at citicny@yahoo.com	
China Laws & Technology Inc.	Law	24, Suite 2408	882		moved to 1 Penn Plaza, Suite 3407, NY, NY 10119	Valley				Richard Li at chinalaw@worldnet.att.net	
China Reinsurance Company	Insurance	24 and 45		1/0 lost	no new address given	N/A			www.cireins.com?		
Chuo Mitsui Trust and Banking	Finance	83, Suite 8322		5/1 lost	moved to 655 Third Ave., 26th floor, NY, NY 10017	Midtown			www.chuomitsui-ny.com	Jerry Dunn at dunnei@chuomitsui-ny.com	

2 World Trade Center - South Tower

Tenant	Industry	Floor	Square Feet Leased	Employees	Status	Destination	New Square Footage	New Employment	Website	Email	Phone / Fax
CITIC New York Corp.	Business Services	22, Suite 2250		2/0 lost	moved to 355 South End Ave., Apt. 3K, NY, NY 10280	Downtown				Er Che at citicny@yahoo.com	
Colortek Kodak Imaging Center	Personal Services	1	731		various NY facilities	New York			www.kodak.com		
Commerzbank Capital Markets	Finance		45,540		backfilled existing offices at 1251 Avenue of the Americas, NY, NY 10020	Midtown			www.commerzbank.com		
Computer Consultants	Consulting				may be reached at PO Box 230913, NY, NY	New York					
Continental Insurance Company	Insurance		40,000		backfilled existing offices at 40 Wall Street, NY, NY 10005; began to move prior to the attack	Downtown			www.cna.com		
Corporation Service Company	Business Services	87, Suite 8746	22,916	100	moved to 1177 Ave. of the Americas, 17th floor, NY, NY 10036	Midtown	26,000	100	www.incsopot.com		tel 1-800-221-0770 and (212) 299-9100, fax (212) 299-9102
Crowley American Transport Inc.	Transportation				moved to 465 South Street, Morristown, NJ 07960	New Jersey					
Crown Pacific International Inc.	Transportation	24, Suite 2406			moved to 1 Mission Way, Tenafly, NJ 07670	New Jersey				Margaret Sun at crownpacific2001@yahoo.com	
CTS Group	N/A	18, Suite 1840			moved to 5th Ave	New York					
Dempsey, Myers & Co. LLP	Accounting	28, Suite 2866			moved to 127 E 56th Street, NY, NY 10022	Midtown					Neva Flynn at (203) 762-5052
Deutsche Bank	Finance	lower floors (also in 4 WTC and 130 Liberty)		360/2 lost	moved to headquarters at 31 West 52nd St, NY, NY 10019; will relocate to 60 Wall Street, NY, NY 10005	Downtown			www.deutschebank.com and www.db.com	Mark Lingnau at marc.lingnau@db.com	Marc Lingnau at tel (212) 469-3993
Diamond Consulting Group	Consulting				moved to 587 5th Ave., NY, NY 10017	Midtown			www.diamondconsulting.com		
Dow Jones & Company, Inc.	Communications	57-58 (and 1 WFC)	72,133		temp. relocated to 4300 North Route 1, South Brunswick, NJ, 34 Exchange Place, Jersey City, NJ 07311, and other Manhattan locations; will return to WFC 1, but plans to sublet 150,000 sf	Downtown, New Jersey, and Midtown		WFC 1: 425; South Brunswick, NJ: 235; Jersey City, NJ: 40; other Manhattan: 70	www.dowjones.com	newswires@dowjones.com	tel 1-800-530-4504 and (609) 520-5542
DWC International	Business Services	93			moved c/o Regus Business Centers, 99 John Street, Suite 226, NY, NY 10038	Downtown			www.dwcinternational.com?	Donald Cheng at donald600@msn.com	
Elyse Dranoff Kovar	Law				temp. moved to 1 Penn Plaza, NY, NY 10119	Valley					tel (212) 778-3073
E-Style Software	Computer Services	24, Suite 2472			no new address given	N/A					Irene Plasken at tel (718) 459-3138
EuroBrokers, Inc. / Maxcor Financial Group	Investments	12 and 84	32,104	280/61 lost	temp. moved to 1 Penn Plaza, NY, NY 10119; will move to 199 Water Street, NY, NY (12-year lease)	Downtown	Penn Plaza: 60,000	210	www.tradesoft.com and www.ebi.com	Robert Brown at rbrown@ebi.com	Brian Clark at tel (212) 778-2731
Fiduciary Trust Company International Inc.	Finance	90 and 94-97, Suite 9400	245,156	645/80 lost	moved to Rockefeller Center, 600 Fifth Ave., NY, NY 10020	Midtown	156,000	600 Fifth Ave: 650	www.ftci.com	William Yun at wyun@ftci.com	tel (212) 446-4100, 1-800-632-2350 ext. 22578, and 1-800-342-5236
Fireman's Fund Insurance Company / Allianz	Insurance	47-48	57,000	190/0 lost	temp. relocated to offices in Liberty Corner, NJ, Jersey City, NJ, and Melville, NY; will move to 75 Wall Street, fls. 18-19, NY, NY 10005 in early 2002	Downtown	Wall Street: 38,627		www.firemansfund.com		
First Commercial Bank	Finance	78, Suite 7868	4,500	27/1 lost	moved to AL headquarters: 800 Shades Creek Parkway, Birmingham, AL 35209?	Alabama			www.firstcommercialbank.com	info@firstcommercialbank.com	in AL: tel (205) 879-2800
Frenkel & Company, Inc.	Insurance	35-36	59,670	180/4 lost	moved to 1740 Broadway, NY, NY 10019, and 30 Montgomery Street, Jersey City, NJ 07302	Midtown and New Jersey	Broadway: 125; NJ: 50	175 of which NJ: 50	www.frenkel.com	John Kelly at jkelly@frenkel.com	tel 1-800-221-4296
Fuji Bank & Trust Company / Mizuho	Finance	79-82	182,956	625/13 lost	temp. operating from 95 Christopher Columbus Drive, Jersey City, NJ 07302 and 622 Third Ave., 33rd floor, NY, NY 10017 (headquarters of Heller Financial); signed a lease for offices at Waterfront Corporate Center, Hoboken, NJ; looking for more space	New Jersey	Hoboken: 37,000		www.fujibank.co.jp		tel (212) 880-7160

2 World Trade Center - South Tower

Tenant	Industry	Floor	Square Feet Leased	Employees	Status	Destination	New Square Footage	New Employment	Website	Email	Phone / Fax
Garban-Intercapital	Investments	55 (and WTC1)	60,548	675/1 lost (in WTC 1 and 2)	executive offices at Bloomberg's headquarters at 500 Park Avenue, desks at 111 Pavonia Ave., Jersey City and 545 Washington Blvd., Jersey City; leased space in office tower under construction at Harborside Financial Center Plaza 5, fl. 11-12, Jersey City	Midtown and New Jersey	Harborside Financial Center, Jersey City: 111,451	450	www.icap.com and www.garban.com		
Globe Tour & Travel	Travel Agency	24, Suite 2488	347		moved to 811 51st Street, Brooklyn, NY 11220	Brooklyn			www.globetravel.com?		Huiming Jiyang at tel (718) 851-1177
Groupe Coface	Insurance	24		15/0 lost	moved to New Haven, CT	Connecticut					
Guy Carpenter & Co., Inc. / Marsh	Insurance	47-54	180,000	700/1 lost	moved to 1166 Ave. of the Americas (at 47th St.), NY, NY 10036 and Hoboken, NJ; signed a 10-year lease for 1 Madison Avenue, NY, NY 10010	Midtown, New Jersey and Valley	Ave. of Am.: 135,000 of Marsh's 390,000; Hoboken: 45,000 of Marsh's 300,000; 1 Madison: 105,225		www.jima.com , www.marsh.com and www.guycarp.com		tel (888) 489-2277 and 1-800-489-2277
H. Abbe International	N/A				moved to P.O. Box 72, Long Beach, NY 11561	Nassau					
Harris Beach & Wilcox, LLP	Law	85	48,800	113/5 lost	moved to 500 Fifth Ave, NY, NY 10110	Midtown	23,000		www.harrisbeach.com		Laurie at tel (212) 539-9601, 1-800-685-1429, and (212) 736-3636
Hartford Steam Boiler Agencies / HSB Group	Insurance	30, Suite 3026 (and WTC 7)	1,600 (total at WTC 2 and 7: 124,190)	6/0 lost	moved to 188 Mount Airy Road, Basking Ridge, NJ 07920	New Jersey			www.hsb.com		tel (908)-766-0872 and 1-800-222-0483, fax (908) 766-0872
Hold Brothers Online Investment Services	Investments	57			moved to 666 Third Ave., Suite 3101, NY, NY 10017	Midtown			www.hold.com	Barry Kronemer at bkronemer@hold.com	tel (646) 865-7400, fax (646) 865-7450
HSQ Technology	Technology				moved to 20A Juneau Boulevard, Woodbury, NY 11797	Nassau			www.hsq.com	Shawn Stumpf at stumpf@hsq.com	
Hua Nan Commercial Bank Ltd.	Finance	28, Suite 2846	12,500	19/0 lost	moved to 330 Madison Ave., NY, NY 10017	Midtown	9,221				
InkMark Inc.	Publishing	15, Suite 1554			moved to 65-84 Booth Street, Apt 3L, Rego Park, NY 11374	Queens					Kevin Luo at tel (212) 526-4546
Intera Corporation Inc.	Business Services	18, Suite 1814	1,180		moved to 145 MacKenzie St., Brooklyn, NY 11235	Brooklyn			www.theinteracorp.com	Meyer Feig at mfeig@theinteracorp.com	tel (917) 301-1522 and (212) 839-0125
IQ Financial Systems	Computer Services	83, Suite 8300	25,163	110/3 lost	moved to 28 West 23rd Street, 5th floor, NY, NY 10010	Valley	22,000		www.iqfinancial.com		tel (212) 329-2922, fax (212) 329-2716
James T. Ratner	Law	15, Suite 1590			moved to 108 Erikas Walk, Mt. Tremper, NY 12457	Ulster					tel (845) 679-4250
John J. McMullen Associates, Inc.	Engineering	15, Suite 1510	15,000	0 lost	moved to 70 Wood Ave. South, Iselin, NJ 08830 (3 year lease)	New Jersey	9,920	35	www.jima.com		
John W. Loofbourrow Associates, Inc.	Finance	15, Suite 1558	1,807	9/0 lost	moved to 110 Maiden Lane, 36th floor, NY, NY 10005	Downtown	1,800	8	www.loofinc.com	Vivian Villalva at vivianv@loofinc.com	tel (212) 558-6400
Joseph Bellard, Law Office	Law	28	3,400	8/0 lost	temp. relocated to 88 Pine Street, New York, NY 10005	Downtown					tel (212) 530-1217, fax (212) 530-1229
Joseph T. Farrell Associates / Arthur V. Doscher & Associates / Allstate Insurance	Insurance	24, Suite 2472			moved to 1107 Broadway, Suite 1406, NY, NY 10018 and 70 West 36th Street, NY, NY 10018	Midtown			www.allstate.com	Arthur Doscher or Joseph Farrell at a012561@allstate.com	
Kasadel Inc.	Consulting	15, Suite 1522	973		temp. moved to 195 Wellington Court, Suite 1D, Staten Island, NY 10314	Staten Island			www.kasadel.com	Kasif Ibad at kashif@kasadel.com and info@kasadel.com	tel (917) 648-7408 and 881-0112, fax (509) 275-6957
Kaufman Films	Telecommunications				moved to 70 West 36th Street, 10th floor, NY, NY 10018	Midtown			www.kaufmanfilms.com	kauffilms@aol.com	tel (646) 414-7580
Keefe, Bruyette & Woods	Investments	88-89	97,600	171/67 lost	moved to 787 Seventh Ave., 4th floor, NY, NY 10019 and 2 Hudson Place, Hoboken, NJ 07030	Midtown and New Jersey	7th Ave.: 55,000; NJ: 1,500	7th Ave.: 150	www.kbw.com		tel 800-726-0006, (860) 297-0300, (804) 643-4250, and (212) 403-1000
Koussevitzky Music Foundation	Non-profit	39			moved c/o Brown Raysman Millstein Felder & Steiner LLP, 900 Third Avenue, NY, NY 10022	Midtown			www.koussevitzky.org	info@koussevitzky.org	tel (212) 895-2367, fax (212) 895-2900
Lee Hecht Harrison / Adecco	Business Services	21, Suite 2126	12,878	12/1 lost	temp. moved to 200 Park Ave., Suite 2600, NY, NY 10166	Midtown			www.lhh.com		Geri Brady at tel (201) 782-3634, (212) 577-0009, fax (212) 557-9807
Levinson Capital Management	Investments	18, Suite 1820			moved to 3 Sandspoint Road, Monsey, NY 10952	Rockland					Sam Levinson at tel (845) 352-7472
Little Tibet Inc.	Retail / Wholesale				moved to 680 Main Street, Middletown, CT 06457	Connecticut			www.littletibet.com	bhumba@littletibet.com	tel (860) 343-1975

2 World Trade Center - South Tower

Tenant	Industry	Floor	Square Feet Leased	Employees	Status	Destination	New Square Footage	New Employment	Website	Email	Phone / Fax
Mancini Duffy	Engineering	15, 21, Suite 2110, and 22	28,091	150/0 lost	moved to 39 West 13th Street, NY, NY 10011 (10-year lease)	Valley	25,000	140	www.manciniduffy.com		Alfonso D'Elia at tel (646) 534-1424 and (973) 984-2700
Man Financial plc / Geldermann Inc.	Personal Services	27	4,000		moved to 1 North End Avenue, Suite 1121, NY, NY 10282	Downtown			www.mangrouplc.com and www.manfinancial.com	ny@manfinancial.com and Richard Falk at rfalk@manfinancial.com	in WTC: tel (212) 589-6200, fax (212) 589-6215
Marnic Technologies Inc.	Technology	93	1,000	4	moved to 245 Park Ave., 24th floor, NY, NY 10167	Midtown	1,000	4	www.marnictech.com		tel (877) 627-6421, fax (877) 627-6423
Martha C Adams	Law				temp. moved to 5 Hannover Square, New York, NY 10004	Downtown					tel (212) 425-7800
Mercer / Marsh	Insurance		30,000		leased space at 1166 Ave. of the Americas, NY, NY 10036 (in progress before 9/11) and Hoboken, NJ	Midtown and New Jersey	Midtown: 25,000; Hoboken, NJ: 5,000		www.mercer.com		tel (212) 345-6000 and 888-374-6377 (for property concerns: tel 212-345-8514), fax (212) 345-4808
Meridian Advisors	Consulting	93			moved to 245 Park Ave., 39th floor, NY, NY 10167	Midtown			www.meridian-advisors.com	Steven Belser at sbelser@meridian-advisors.com	tel (212) 792-4218, fax (212) 792-4001
Metro Telecom	Telecommunications				may be reached at 5755 Dupree Drive, Suite 100, Atlanta, GA 30327	Atlanta			www.metrotelecom.com	info@metrotelecom.com	tel 1-800-535-6294, fax 1-800-551-1355
Morgan Stanley Dean Witter Income Securities	Finance	43-46, 56, and 59-74 (and WTC 5)	840,000	3,700 (at WTC 2 and 5)/6 lost	moved to 75 Varick St. and 1221 6th Ave. (5-year sublets); has offices at 1585 and 1633 Broadway, 750 7th Ave., Pierpont Plaza in Brooklyn, and 34 Exchange Pl., Jersey City, NJ 07311; bought the former Texaco headquarters in Harrison, NY	Downtown, Midtown, Brooklyn, New Jersey and Westchester	Varick St.: 245,874; 1221 6th: 282,584; 1633 Broadway: 62,000; Jersey City: 66,177; Harrison, NY: 725,000 (107 acres)	14,000 in NY/NJ offices (incl. 500 at 825 Third Ave. and 600 in Jersey City); 2,000-3,500 to move to Harrison, NY; fired 200	www.morganstanley.com		tel (888) 883-4391 and Karen Dennehy at (201) 938-6010
National Development and Research Institute	Personal Services	16	44,325	130/0 lost	leased space at 71 West 23rd Street, 8th floor, NY, NY 10010	Valley	37,000	130	www.ndri.org	Dave Ruby at dave.ruby@ndri.org	tel (212) 845-4400
Neotecra Inc. / Pearson Inc.	Consulting	15, Suite 1526	503		moved to 75 Spring St., NY, NY 10012	Valley			www.neotecra.com	Nirmal Kumar at nirmal@neotecra.com	Sachit Kumar Ramdas at tel (980) 222-3335
New York Institute of Finance	Business Services	17, Suite 1700	24,539	65/0 lost	moved to 1330 Ave. of the Americas, NY, NY 10019	Midtown	20,000	65	www.nyif.com		tel (212) 641-6616, fax (212) 641-6309
New York Shipping Association Inc.	Transportation	19-20	80,000	140	moving to MetroPark, NJ in the second quarter of 2002	New Jersey					
New York State Department of Taxation and Finance	Government	86-87	73,982	224/40 lost	moved to 1740 Broadway, NY, NY 10019	Midtown	90,000		www.tax.state.ny.us		tel 1-800-225-5829
New York State Retirement Office	Government	22	1,117		temp. located in the Port Authority Bus Terminal; will relocate to 1 Penn Plaza, NY, NY 10119	Valley					tel (518) 474-7736
New York Stock Exchange, Inc.	Finance	28-30, Suites 2928 and 3010	10,853		Enforcement Division has moved to 20 Broad St., NY, NY 10002, main office now at 14 Wall St., fls. 12, 14 and 19, NY, NY 10005 (10-yr. lease); looking to build a new trading facility at 15 Broad St., NY, NY 10002	Downtown	Wall St: 64,884		www.nyse.com		tel (212) 656-2600 and 656-3000
NuTech Integrated Systems Incorporated	Business Services	18, Suite 1824			no new address given	N/A			www.nutech1.com and www.nutech.net	info@nutech1.com	tel 1-800-813-3278; in WTC: fax (212) 938-0776
Oppenheimer Funds, Inc. / Massachusetts Mutual Life	Finance	31-34 and 37	231,000	600/0 lost	moved to 498 Seventh Ave, fls. 8-10, 14, and 16, NY, NY 10018 (10-year lease)	Midtown	7th Ave: 135,427	600	www.oppenheimerfunds.com		Jeanee Terrio at tel (212) 323-0200 and 1-800-525-7048
Orient International Co. / Cybernetics	Business Services	15	710		moved to 134 West 29th Street, NY, NY 10001	Valley					
PACO Group Inc.	N/A	18, Suites 1828 and 1834	1,163		moved to 261 Fifth Avenue, Suite 701, NY, NY 10016	Midtown			www.pacogroup.com	Jay Wang at jwang@pacogroup.com	tel (212) 685-0578, fax (212) 685-1379
Paging Network of New York	Communications	14	19,203		has not announced plans for relocation	N/A					
Patinka International (USA) Inc.	Personal Services	14, Suite 1488	195		moved to 1369 67th Street, Brooklyn, NY 11219; may be reached at 215 E. 88th Street, Apt. 1J, NY, NY 10128	Brooklyn					Denis Liao at tel (347) 452-2348
Rainmaker Ventures	Investments	15, Suite 1522	593	3	moved to 114 East 32nd Street, NY, NY 10016	Midtown		3		Ash Yagnik at ash515692000@yahoo.com	tel (212) 545-9100
Regus Business Centres PLC / International Office Centers Corporation	Business Services	93 (see WTC 1)	49,028	?/5 lost	backfilling space at 245 Park Avenue, 24th and 39th floors, NY, NY 10167	Midtown	Park Ave.: 70,000		www.regus.com		tel (212) 792-4000 and (914) 304-4100, fax (212) 792-4001
Robert Waxman, CPA	Accounting	15, Suite 1586			moved to 420 E. 51st Street, NY, NY 10022	Midtown					Robert Waxman at tel (212) 935-1396

2 World Trade Center - South Tower

Tenant	Industry	Floor	Square Feet Leased	Employees	Status	Destination	New Square Footage	New Employment	Website	Email	Phone / Fax
Royal Indemnity Company / Royal and Sun Alliance	Insurance		small		moved to headquarters of Royal and Sun Alliance at 9300 Arrowpoint Boulevard, Charlotte, NC 28201	North Carolina					Kyle Kendrick at tel (704) 522-3447
Sandler O'Neil & Partners LP	Investments	104	30,000	148/66 lost	moved to 919 3rd Ave, NY, NY 10022 (5-year lease)	Midtown	35,000	143	www.sandleroneil.com		tel (888) 583-8900
SCOR U.S. Corporation	Insurance	23 and 24, Suite 2444	59,000	120/0 lost	moved to 199 Water Street, NY, NY 10038	Downtown	33,000		www.scor.com		tel (630) 775-7393 and (212) 480-1900
Seabury & Smith / Marsh	Insurance	49	40,000		consolidated with Marsh at 1166 Ave. of the Americas, 23rd and 26th floors, NY, NY 10036, and moved to offices at 44 Whippary Road, Morristown, NY 07962, 212 Carnegie Center, Princeton, NJ 08543, and 3333 New Hyde Park Road, New Hyde Park, NY 11042	Midtown, New Jersey and Westchester	Ave. of Am.: 35,000 of Marsh's 390,000	Ave. of Am.: 52; Morristown: 4; Princeton: 5; New Hyde Park: 45	www.seabury.com and www.marsh.com		Monica Green at tel (515) 365-1169, fax (212) 345-4431
Seguros Commercial America	Business Services		27,000		closed its NY office	Elsewhere			www.commercialamerica.com		
Sinochem American Holdings, Inc. / Chinese National Chemicals Import & Export	Wholesale	22, Suites 2222 and 2252		20/0 lost	moved into existing offices at 120 Schor Avenue, Leonia, NJ 07605	New Jersey			www.sinochem.com	linminqu@sinochem-usa.com	tel (201) 242-9559, fax (201) 242-9209
Sitailong International USA, Inc.	Business Services	14, Suite 1480	172	5	moved to 39-15 Main Street, Suite 406, Flushing, NY 11354	Queens	150	5	www.sitailong.com	Henry Li at sitailong@aol.com	tel (718) 461-2454 and Rona Li at (917) 696-0621, fax (718) 461-2449
Stacy M. Parker	Law				moved to 685 3rd Ave., New York, NY 10017	Midtown					tel (212) 792-9577, fax (212) 254-4815
Stewart Engineering Associates	Engineering	18, Suite 1840			moved to 156 Fifth Ave., Suite 1134, NY, NY 10010	Valley			www.cts-group.net	email@cts-group.net and Stuart Sokoloff at stuart@cts-group.net	tel (212) 206-0304, fax (212) 243-4121
Sun Microsystems, Inc.	Computer Services	25-26	89,162	346/1 lost (on plane)	temp. located c/o A.T. Kearney, Citigroup Center, 28th floor, NY, NY and at Sun's offices in Stamford, CT and Hackensack, NJ (for 18 mos.); will occupy 12-year lease of 101 Park Avenue, 3rd and 4th floors, NY, NY 10178 from Fall 2002	Midtown	Citigroup Center: 27,326 sf; 101 Park: 78,200 sf	Citigroup Center: 200	www.sun.com and www.supportforum.sun.com/recovery	Beth Pampaloni at beth.pampaloni@sun.com	tel 1-800-872-4786
SunGard	Computer Services	58		8/3 lost	relocated to Chicago and the West Coast	Elsewhere					
TD Waterhouse Group, Inc.	Finance	24, Suite 2424	18,591	18/0 lost	moved to 1 Harborside Financial Center, Plaza 4A 8th floor, Jersey City, NJ 07311 as early as June 2001	New Jersey		18	www.tdwaterhouse.com and www.td.com		tel (416) 982-7528 and 1-800-934-4448
Telligent Advisors LLC	Investments	46, Suite 4665		5	moved to 17 Battery Place, NY, NY 10004	Downtown		5			George Lin at tel (917) 447-7988
Thacher, Proffitt & Wood	Law	20 and 38-40	120,000	300/0 lost	moved to 11 W. 42nd St., NY, NY 10036	Midtown	101,719	300	www.thacherproffitt.com	Omer "Jack" Williams at owilliams@tpwlaw.com	Jack Williams at tel (212) 789-1200 and 912-7400, fax (212) 789-3500
The Graf Network	Business Services				no new address given	N/A			www.thegraf.net	Augustinus Wong at aug@thegraf.net	
Thomas Quantitative Group LLC / Quant Research Group	Business Services	58			moved to 520 White Plains Road, Suite 500, Tarrytown, NY 10591	Westchester			www.quantresearchgroup.com	info@quantresearchgroup.com and Jean Thomas at jean@quantresearchgroup.com	tel (914) 366-7300, fax (914) 206-4285
Top of the World Trade Center Observatories	Hospitality				no new address given	N/A					
Transit Center TC, inc.	Transportation	22, Suite 2238	8,455		moved to 1065 Ave. of the Americas, 16th Floor, NY, NY 10018	Midtown			www.transitcenter.com	Larry Filler at lfiller@transitcenter.com	tel 1-800-331-CHEK
Union Bank of California International	Finance	14, Suite 1410	25,146		moved to 40 Wall Street, NY, NY 10005	Downtown	23,553		www.uboc.com		Larry Fitzgerald at tel (201) 413-8796
Unistrat Corporation of America	Business Services	23	10,000	5/0 lost	moved to 199 Water Street, NY, NY 10038	Downtown			www.unistrat.com	webmaster@unistrat.fr	tel (212) 389-6470, fax (917) 322-0430
Usem Bergstrand Capital Management	Investments	18, Suite 1822	997		can be reached c/o 284 Carroll Street, Brooklyn, NY 11231	Brooklyn			www.ubcapital.com	Hakan Bergstrand at hakan@ubcapital.com	Hakan Bergstrand at tel (917) 716-3722
Verizon Communications	Communications	CNCR and 9-12 (and 140 West St.)	155,490	400/2 lost	moved to existing locations; will return to 140 West St., NY, NY 10007	Downtown			www.verizon.com		
Vestek Systems / Primark / Thompson Financial	Finance	78		?/2 lost	moved to 156 West 56th Street, 6th floor, NY, NY 10019, 125 Half Mile Road, Suite 200, Red Bank, NJ 07701, and 68 Laight Street, NY, NY 10013	Downtown, Midtown, and New Jersey			www.vestek.com		tel (212) 581-4000, (732) 933-2710, and (212) 680-1540, fax (212) 765-0808 and (732) 933-2719
Warner Bamboo Floors Inc.	Retail / Wholesale	18, Suite 1844			moved to existing office in Linden, NJ	New Jersey			www.warnercorp.com	warnerbamboo@aol.com	Grace Wang at tel (973) 495-8221, fax (973) 966-8870

**2 World Trade Center - South
Tower**

Tenant	Industry	Floor	Square Feet Leased	Employees	Status	Destination	New Square Footage	New Employment	Website	Email	Phone / Fax
Washington Group International Inc.	Engineering	91	48,800	190/13 lost	temp. moved to 1 Penn Plaza, NY, NY 10019, Princeton, NJ and elsewhere; negotiating for permanent space in Manhattan	Manhattan	Penn Plaza: 32,000		www.wgint.com		tel (609) 720-3050
Washington Mutual, Inc.	Insurance	22	1,117	3/0 lost	temp. moved to 1 Penn Plaza, NY, NY 10019, Princeton, NJ and elsewhere; negotiating for permanent space in Manhattan	Manhattan			www.wgint.com		tel (609) 720-3050
Weatherly Securities Corporation	Finance	29	18,801	55 or 60/0 lost	moved to 10 East 50th Street, NY, NY 10022	Midtown	18,000		www.weatherlysecurities.com	Maria Porcelli at porcellim@weatherlysecurities.com	Alicia at tel (212) 261-2010 and 1-800-835-3015
Westfield Corporation	Real Estate	17		10/1 lost	may have moved to CA headquarters: 11601 Wilshire Boulevard, 12th floor, Los Angeles, CA 90025 (held a 99-year retail lease for the WTC)	California?			www.westfield.com		in CA: tel (310) 478-4556, fax (310) 478-01267
World Network International	N/A				moved to 11 Rector, Long Island City, NY 11104	Queens				Walter Iwachiw at iwachiw2001@yahoo.com	
Xerox Document Corporation	Manufacturing	BSMT, Suite B-3	5,400	2 lost	no new address given	Midtown			www.xerox.com	webmaster@xerox.com	tel (865) 228-9127
Total Sq. Ft.			4,761,416								

3 World Trade Center

Tenant	Industry	Floor	Square Feet Leased	Employees	Status	Destination	New Square Footage	New Employment	Website	Email	Phone / Fax
Everything Yogurt and Salads / Restaurant Systems	Concessions	Ground			relocated to other NYC locations	New York				Bill Moore at rsbill@aol.com	
Go Forth Enterprises	Personal Services				moved to 8 Remsen Street, Staten Island, NY 10304	Staten Island					
Grayline New York Tours Inc.	Personal Services				moved to 49 West 45th Street, 5th floor, NY, NY 10036	Midtown	3,300	8	www.grayline.com	info@grayline.com	tel (212) 397-2620, fax (303) 394-6950
Guest Service Publications Inc.	Publishing				moved to 5000 Brush Hollow Road, Suite 100, South Salem, NY 10590	Westchester				Eric Miller at gst1@optonline.net	
Inner Strength Studio	Personal Services	22			moved to 211 East 18th Street, Apt. 1J, NY, NY 10003	Valley				Sherri Triolo at divalaw13@aol.com	
Marriott Hotel World Trade Center / New York Vista	Hospitality	All	584,600	1,100	employees were not relocated	N/A	0	0	www.marriott.com	Kathy Deffy at tel (301) 380-7770	tel 1-866-866-9928 and (212) 385-4900, fax (212) 227-8136
Olga's Salon	Personal Services				moved to 355 South End Avenue, NY, NY 10280	Downtown					
O and M Beauty Concepts Inc.	Personal Services				moved to 7 Lexington Ave., Suite 1G, NY, NY 10010	Valley					
Roma News & Gift Inc.	Personal Services	Ground			moved to 111-62nd Drive, Forest Hills, NY 11375	Queens				Kirit Patel at kiritp007@aol.com	
Tall Ships Bar and Grill/ Marriott Corporation	Restaurant				moved to 1 Marriott Drive, Washington, DC 20058	Washington, DC			www.marriott.com	Ann Gunsteens at a.gunsteens@marriott.com	
Urban Athletics LLC	Retail				moved to 29 Broadway, NY, NY 10006	Downtown				Joseph Macari at josephmacari@spintmail.com	
Total Sq. Ft.			600,000								

**4 World Trade Center -
Commodities Exchange
Center**

Tenant	Industry	Floor	Square Feet Leased	Employees	Status	Destination	New Square Footage	New Employment	Website	Email	Phone / Fax
A & A Futures / Jared Siegel	Investments	8			moved to 248 Long Swamp Road, New Egypt, NJ 08533	New Jersey				Jared Siegel at stonegates@aol.com	tel (718) 609-3352
Allan Capital Management	Investments				moved to 172 Riverside Ave., Riverside, CT 06878	Connecticut				Hugh Allen at allan_hugh@hotmail.com	
Alliance Coffee Trading Inc.	Investments				moved to 7406 Narrows Ave., Brooklyn, NY 11209	Brooklyn					
Anthony Lamonica	Investments	8			moved to 13 Tudor Lane, Scarsdale, NY 10583	Westchester				alam081@aol.com	
Arcal Brokerage	Investments	8			moved to 23-10 43rd Ave., Long Island City, NY, 11101	Queens					
Arnold Fuchs	Investments				moved to 4 East 8th Street, NY, NY 10003	Valley				livinlife88@aol.com	tel (646) 498-4750
Atlantic Cotton Corp.	Commodities				moved to 14 Brown Ave., Springlake, NJ 07762	New Jersey				John Stickle at jstix@msn.com	
B & D Commodities	Investments				moved to 23-10 43rd Ave., Long Island City, NY, 11101	Queens				Mark DeFelice at bd586@aol.com	
BCJ Commodities	Investments	8			moved to 23-10 43rd Ave., Long Island City, NY, 11101	Queens					
Bernstein-Greenberg Trading	Investments				moved to 1 14th Street, Hoboken, NJ 07030	New Jersey					
Bits-n-Bytes Computer Services	Computer Services	2, Suite 213			moved to 358 7th Ave., Brooklyn, NY 11215	Brooklyn			www.bits-n-bytes.biz		temp. tel (718) 788-3096
Board of Trade of the City of New York (NYBOT)	Finance	7-9	125,000	250	moved offices to 174 Hudson Street, 6th floor, NY, NY 10013, and exchange floor to 23-10 43rd Ave., Long Island City, NY 11101	Downtown and Queens			www.nybot.com	Walter Hines at walterhines@nybot.com	in Hudson St: tel (212) 625-0432 and 625-6669; in LIC: tel (718) 391-7000 and 1-800-700-1392
Brian C. Massa Commodities	Investments				moved to 377 Rector Place, Suite 19E, NY, NY 10280	Downtown				Brian Massa at bcmfutures@aol.com	tel (646) 246-4228
C & L Commodities	Investments	8			moved to 23-10 43rd Ave., Long Island City, NY 11101	Queens				Kelly Cooper at sgrmkt@aol.com	
Cameo Futures / Trading	Investments	8			moved to 23-10 43rd Ave., Long Island City, NY 11101	Queens				Egidio LePre at elepre@optonline.net	tel (718) 610-2325
Capcomm Trading LLC	Investments	8			moved to 115 Whitman Ave., Staten Island, NY 10308	Staten Island					
Charles Bongiorno	Investments	8			moved c/o the Commodities Exchange Center, 516 North 7th Street, New Hyde Park, NY 11040	Nassau				Charles Bongiorno at crb8175@optonline.net	
Charles Spalding	Investments	8			moved to 233 East 69th Street, Apt 11B, NY, NY 10021	Upper East Side					
Chris Cady	Investments				can be contacted at 3 Blue Water Hill, Westport, CT 06880	Connecticut				ccady@attglobal.net	tel (718) 906-5961
Christopher Bongiorno	Investments	8			moved c/o the Commodities Exchange Center, 516 North 7th Street, New Hyde Park, NY 11040	Nassau				crb8175@optonline.net	tel (718) 609-6035
Christopher J. Heintz	Investments				moved to 23-10 43rd Ave., Long Island City, NY 11101	Queens					
Clint V. Pazdera Inc.	Investments				moved to 23-10 43rd Ave., Long Island City, NY 11101	Queens				clintvp@aol.com	tel (908) 581-3359
Clark Trading	Investments				moved to 41 School Lane, Huntington, NY 11743	Suffolk					
Copia Trading	Investments	9 Suite 924			no new address given	N/A					Fred Schoenhut at tel (516) 677-9121
Cottonop Trading Inc.	Investments	9, Suite 901			moved to 519-62 Street, Brooklyn, NY 11220	Brooklyn					
DAK Futures	Investments				moved to 23-10 43rd Ave., Long Island City, NY, 11101	Queens					
David Libman	Investments				moved to 23-10 43rd Ave., Long Island City, NY, 11101	Queens					
DBL Commodities	Investments				moved to 250 Mercer Street, NY, NY 10012	Valley				sldr_o_frtn_@aol.com	tel (212) 748-1912

**4 World Trade Center -
Commodities Exchange
Center**

Tenant	Industry	Floor	Square Feet Leased	Employees	Status	Destination	New Square Footage	New Employment	Website	Email	Phone / Fax
Deutsche Bank / Deutsche Asset Management	Finance	4-6 (also in 130 Liberty)	273,991		relocated to 31 W. 52nd Street, 280 Park Ave., 885 3rd Ave., 1501 Broadway, 55 Broad, 14, 16 and 60 Wall, 126 East 56th, and 1251, 1290 and 1301 Ave. of the Americas; backup operation at 34 Exchange Place, Jersey City, NJ 07311	Midtown, Downtown and New Jersey	60 Wall: 1,600,000	NJ: 900	www.deutschebank.com and www.db.com		
Dominick Minervini	Investments				moved to 275 High Street, Nutley, NJ 07110	New Jersey				dom098@juno.com	tel (201) 532-8009
Douglas R. Capra	Investments	8			moved to 2081 Misty Hollow Drive, Wall, NJ 07719	New Jersey					
Earl Enterprises	Investments				moved to 23-10 43rd Ave., Long Island City, NY 11101	Queens					
Eric Wineburg Commodities	Investments	8			no new address given	N/A				Eric Wineberg at schmoozies@aol.com	tel (917) 769-7473
Ernest Lopeneja III	Investments				moved to 23-10 43rd Ave., Long Island City, NY 11101	Queens					
Eugene Libertucci	Investments				no new address given	N/A				rollgator84@aol.com	tel (718) 609-3392
Flowers of the World	Retail / Wholesale	CNCR			moved to 5 Hanover Square, NY, NY 10004	Downtown			www.flowersoftheworld.com	Peter Grontas at hacgro@aol.com	tel 1-800-770-3125, fax (212) 363-6495
Frank Fundaro	Investments				moved to 23-10 43rd Ave., Long Island City, NY, 11101	Queens					tel (646) 436-4729
Frank Massa Commodities	Investments				moved to 380 Rector Place, Suite 17H, NY, NY 10280	Downtown				Frank Massa at fmnyc@aol.com	tel (646) 246-4228
Gary Reina	Investments				moved to 20 Louis Drive, Melville, NY 11747	Suffolk				garyreina@aol.com	tel (516) 857-6147
Geldermann Inc. / Man International	Investments				moved to the WFC	Downtown					Diana Santana at tel (212) 938-1600
Gentile Commodities Inc.	Investments				moved to 277 Cassa Loop, Holtsville, NY 11742	Suffolk					
George Evans	Investments	8			moved to 42 Colby Avenue, Flanders, NJ 07836	New Jersey					tel (718) 609-3422
Global Coffee	N/A				moved to 168 Jefferson, Staten Island, NY 10312	Staten Island					
Grecco Commodities	Investments				moved to 40 Bangor Street, Staten Island, NY 10314	Staten Island					
Green Coffee Association	Business Services	5	7,500		moved to 174 Hudson Street, 6th floor, NY, NY 10013	Downtown			www.green-coffee-assoc.org		tel (212) 625-6630, fax (212) 625-0432
High Grade Trading	Investments	8			moved to 17 Kell Avenue, Staten Island, NY 11101	Staten Island					
Hollywood Commodities	Investments				moved to 213 East Sheridan St., Dania, FL 33004	Florida			www.jayshine.com/hollywood.html	brokertoo@aol.com	tel 1-800-938-3282 and 1-800-272-1130
Hudson Commodities Inc.	Investments	9, Suite 9190			moved to 73 Mountainview Avenue, Staten Island, NY 10314	Staten Island			www.thenyfe.com	bqal@aol.com	tel (212) 742-5867
Ideal Futures Inc.	Investments				moved to 23-10 43rd Ave., Long Island City, NY 11101	Queens					
Irin Israel	Investments	8			moved to 120 East 34th Street, Apt 3H, NY, NY 10016	Midtown				irin8@yahoo.com	
Istria Capital Management LLC	Investments	9, Suite 9190			moved to 183 New Dorp Lane, Staten Island, NY 10306	Staten Island			www.istriacapital.com	istriacapital@aol.com and Alfred Peras at bqal59@aol.com	tel (212) 748-4308, fax (718) 351-4951
Jedi Futures Corp.	Investments				moved to 546 Richmond Road, East Meadow, NY 11554	Nassau					
Jessica Pearson Trading	Investments				moved to 5 Roosevelt Place, Suite 3L, Montclair, NJ 07042	New Jersey					
JFN Commodities	Investments	8			moved to 11-33 Seventy Fifth Road, Forest Hills, NY 11375	Queens					
JMF Futures Inc.	Investments				moved to 18 Old Town Lane, Huntington, NY 11743	Suffolk					
JNJ Commodities / Jose Pena Commodities	Investments				moved to 23-10 43rd Ave., Long Island City, NY 11101	Queens					tel (646) 662-6211
John Bruno	Investments				no new address given	N/A				sixthelmt@aol.com	tel (917) 770-9549

**4 World Trade Center -
Commodities Exchange
Center**

Tenant	Industry	Floor	Square Feet Leased	Employees	Status	Destination	New Square Footage	New Employment	Website	Email	Phone / Fax
John Byrnes	Investments				moved to 23-10 43rd Ave., Long Island City, NY 11101	Queens				pwee8115@yahoo.com	tel (917) 826-1280
John Cirelli	Investments				no new address given	N/A				John Cirelli at cirelco@aol.com	tel (917) 859-8061
John Lucchese	Investments				no new address given	N/A					tel (718) 610-2091
John Robinson	Investments				moved to 23-10 43rd Ave., Long Island City, NY 11101	Queens				johnr1027@aol.com	tel (914) 805-0900
JSM Commodities	Investments				moved to 111-33 75th Road, Forest Hills, NY 11375	Queens					
Juco Trading Inc.	Investments				moved to 1125 83rd Street, Brooklyn, NY 11228	Brooklyn					
Katherine Doukas	Investments				moved to 23-10 43rd Ave., Long Island City, NY 11101	Queens					
KCC Trading Co.	Investments				moved to 175 Getz Ave., Staten Island, NY 11101	Staten Island				John Lucchese at lvieucrazy182@aol.com	
KMF Commodities	Investments				moved to 23-10 43rd Ave., Long Island City, NY 11101	Queens					
L&I Commodities Inc.	Investments				moved to 23-10 43rd Ave., Long Island City, NY 11101	Queens					
Leonard L. Friedman	Investments				moved to 23-10 43rd Ave., Long Island City, NY 11101	Queens				lentoni@home.com	tel (908) 915-9547
LETO Commodities Inc.	Investments				moved c/o Leonard Rosena Company, 15 Maiden Lane, NY, NY 10038	Downtown					
LIT / First Options	Investments				moved to 111 Broadway, NY, NY 10006	Downtown			www.foc.com	Tim Connelly	tel (212) 346-7006 and 1-800-922-5713
Liubicich Commodities	Investments				moved to 23-10 43rd Ave., Long Island City, NY 11101	Queens				Paul Liubicich at paul.liubicich@gte.com	tel (718) 609-3364
Lynn's Hallmark	Retail	CNCR			Hallmark has various other locations in NYC	New York City			www.hallmark.com	Perry Kleinman at rar316@aol.com	
McNamara Trading	Investments	8			no new address given	N/A				Robert Ferraro at mcfindex@hotmail.com	John McNamara at tel (212) 748-1888
Mercury Futures Inc.	Investments				moved to 79 Browning Terrace, Old Bridge, NJ 08857	New Jersey					
Michael Azzara	Investments				moved to 145 Ledges Road, Ridgefield, CT 06877	Connecticut				maadog007@hotmail.com	tel (718) 610-2145
Michael Giordano	Investments				moved to 23-10 43rd Ave., Long Island City, NY 11101	Queens					tel (718) 609-3406
Michael Jacobson	Investments				moved to 23-10 43rd Ave., Long Island City, NY 11101	Queens				trdr1919@optonline.com	
Miolan Trading	Investments	8			moved to 23-10 43rd Ave., Long Island City, NY 11101	Queens				Leo Miolan at tonyt184@aol.com	tel (718) 609-3712
Natisse Nail Salon	Personal Services	CNCR		0 lost	no new address given	N/A			www.natisse.com	natisse@hairnet.com	tel (212) 775-0330
North Star Oil Corp.	Commodities	9, Suite 9222			moved to 1 North End Ave., NY, NY 10282	Downtown					
NYAM LLC	Investments	7, Suite 7178		12	moved to Queens; can be reached at 149 Wooster Street, Apt 8NE, NY, NY 10012	Queens		4			Jan-Willem van der Dorpel at tel (917) 297-6227
NYMEX / New York Mercantile Exchange	Finance	7, Suite 744 (and WFC)		3 lost	returned to 1 North End Ave., NY, NY 10282	Downtown			www.nymex.com	exchangeinfo@nymex.com	tel (212) 299-2000
Overseas-Chinese Banking Corp.	Finance	7, Suite 7302	6,516		moved to the HSBC Building, Suite 705, 1 Hanson Place, Brooklyn, NY 11243	Brooklyn			www.ocbc.com		tel (718) 488-4987, fax (718) 488-4988
Pappalardo Investment Company	Investments	8, Suite 833			moved to 80 Audrey Zapp Drive, Jersey City, NJ 07305	New Jersey				Leonard Pappalardo at limitup@msn.com	tel (718) 610-2217
PAS Commodities Inc.	Investments	8			moved to 2157 Legion Street, Bellmore, NY 11710	Nassau					
Pasco Trading Corp. / Pasco Futures	Investments	8			moved to 24 Kimberly Court, Manalapan, NJ 07726	New Jersey					in Dublin: Bryan Noble at tel 353 1 670 0138
Philip Avery Putter	Investments				moved to 23-10 43rd Ave., Long Island City, NY 11101	Queens				avry8542@aol.com	
PRN Options	Investments				moved to the NY Mercantile Exchange, 1 North End Ave., NY, NY 10282	Downtown					
Rahzan Mingus LLC	N/A	9, Suite 9222			moved to 390 10th Street, NY, NY 10003	Valley			www.rahzan.com	Tim Hatamian at tsh@rahzan.com	
RCF Futures	Investments	8			moved to 170 West End Ave., Apt 9D, NY, NY 10023	Upper West Side					

**4 World Trade Center -
Commodities Exchange
Center**

Tenant	Industry	Floor	Square Feet Leased	Employees	Status	Destination	New Square Footage	New Employment	Website	Email	Phone / Fax
RFK Trading Inc.	Investments				moved to 320 Sinclair Court, Morganville, NJ 07751	New Jersey					
Rob Shuster	Investments				moved to 23-10 43rd Ave., Long Island City, NY 11101	Queens					
Robert Katz	Investments	9, Suite 9174			moved to 309 Hanna Road, River Vale, NJ 07675; plans to return to the New York Mercantile Exchange in the first quarter of 2003	Downtown				katz8142@optonline.net	tel (718) 610-2085
Robert J. Layton & Co.	Investments	8			moved to 23-10 43rd Ave., Long Island City, NY 11101	Queens				lats183@aol.com	tel (718) 610-2133
Robert J. Scala Jr.	Investments	8			moved to 18 Milleridge Drive, Dear Park, NY 11729	Suffolk				bscala@mindspring.com	tel (646) 498-7751
Roger Corrado	Investments	8			no new address given	N/A					tel (718) 610-2085
Ronald Laspagnoletta	Investments				moved to 4 Hampshire Circle, Bronxville, NY 10708	Westchester					
Ry-Rob Commodities Inc.	Investments	8			moved to 7 Iroquois Trail, Monsey, NY 10952	Rockland				Howard Pachter at pachter@aol.com	
SG Visions	Business Services	9, Suite 9222		8	moved to 180 Montague Street, Suite 31D, Brooklyn, NY 11201	Brooklyn		1			Jerald Goodman at tel (718) 852-9894
Shain Trading Corp.	Investments	8			moved to 111 Broadway, 6th Floor, NY, NY 10006	Downtown				Barry Shain at baryshain@aol.com	
Steven Kamin	Investments				moved to 3 Heritage Court, Rye Brook, NY 10573	Westchester				rskamin@webtv.net	tel (718) 609-3488
Sugar Broker Associates	Investments	8			moved to 40 Woodvale Loop, Staten Island, NY 10309	Staten Island					
Tacs Crown Jewelry	Personal Services	CNCR			moved to 30 Columbia Turnpike, Florham Park, NJ 07932	New Jersey				Ru Ju Tran at rujutran@aol.com	
Thomas Fiorenze	Investments				moved to 23-10 43rd Ave., Long Island City, NY 11101	Queens				tommyf@optonline.net	tel (718) 609-3451
Thomas W. Reardon	Investments				moved to 23-10 43rd Ave., Long Island City, NY 11101	Queens					
Tower Computer Services	Computer Services	9, Suite 9154		5	moved to 22 Cortlandt Street, NY, NY 10007	Downtown		5			Mendel Ciment at tel (718) 363-0791
Trademark Commodities	Investments				moved to 9 Baccarat Court, Montville, NJ 07045	New Jersey				Alan Goldenberg	
Walkin Commodities Inc.	Investments				no new address given	N/A				James Walkin at jwal64@aol.com	tel (718) 609-3352
William H. McGee & Co.	Investments				no new address given	N/A					John Martin at tel (212) 775-1300
Windsor Commodities	Investments	8			moved to 23-10 43rd Ave., Long Island City, NY 11101	Queens					
Total Sq. Ft.			576,000								

5 World Trade Center -
Northeast Plaza

Tenant	Industry	Floor	Square Feet Leased	Employees	Status	Destination	New Square Footage	New Employment	Website	Email	Phone / Fax
American Airlines	Transportation	CNCR			moved to other NYC locations	New York			www.aa.com		
American Shipper Magazine / Howard Publications	Publishing	9, Suite 9259			moved to 111 Broadway, NY, NY 10006 (2-year lease)	Downtown		3	www.americanshipper.com		tel (212) 233-3648, fax (202) 783-3919
A-One Special Advocates	N/A				moved to 208 W. 30th Street, Rm. 902, Woodside, NY 11377	Queens					
Borders Books and Music / Borders Group, Inc.	Retail / Wholesale	CNCR			employees relocated to other Manhattan stores; may be contacted at 100 Phoenix Br., Ann Arbor, MI 48108	Manhattan			www.bordersgroupinc.com		
Continental Forwarding	Transportation	8, Suite 8201			moved to 1027 North Avenue, Elizabeth, NJ 07201	New Jersey					
Council of State Governments	Government	9, Suite 9241			may be reached at P.O Box 20811, New York, NY 10009	Valley	3000		www.csgeast.org	Pamela Stanley at pamela@csgeast.org	tel (212) 912-0128 and Cynthia Valle at (917) 488-1552, fax (212) 912-0549
Credit Suisse First Boston	Finance	7-9	179,244	850/1 lost	moved into its headquarters at 11 Madison Ave., NY, NY 10010 (ca. 5-year lease); its subsidiary CSFBDirect leased space at 1 Madison, NY, NY 10010	Valley	11 Madison: 250,000; CSFBDirect space at 1 Madison: 1,443,000	700	www.csfb.com and www.credit-suisse.com		Cristina von Bargen at tel and fax (212) 325-2000, hotline 1-877-335-CSFB
DHL Courier Services	Business Services	1			moved to other NYC locations	New York			www.dhl-usa.com		
Ecce Panis	Restaurant				may be reached at 447 Gotham Parkway, Carlstadt, NJ 07072	New Jersey			www.eccepanis.com		tel 1-888-EP-BREAD
Express Mail	Business Services	1		0 lost	moved to other NYC locations	New York			www.usps.gov		
FedEx Corporation	Transportation	1			moved to other NYC locations	New York			www.fedex.com		tel 1-800-GO-FEDEX
Gregg Monterosso	N/A				moved to 428 Rolling Rock Road, Springfield, NJ 07081	New Jersey					
Hale and Hearty Soups	Concessions	CNCR			no new address given	N/A				Simon Jacobs at simonjacobs100@aol.com	
JP Morgan Chase & Company	Finance	1			leased space at 277 Park, NY, NY 10172	Midtown	1,300,000		www.chase.com		
Lower Manhattan Cultural Council	Design	9, Suite 9235 - office (WTC 1 - studio)	20,000	15/1 lost	temp. moved to 145 Hudson Street, Suite 801, NY, NY 10013	Downtown	4,500		www.lmcc.com	lowermanhattanculturalcouncil@hotmail.com and Tricia Meer at triciamire@hotmail.com	Trisha Meer at tel (212) 219-9401, fax (212) 219-2058
Marcia Lucas Kessler	Law				moved to 11 Madison Ave, NY, NY 10010	Valley					tel (212) 538-1293
Michael Beck	N/A				moved to 212 B 136th Street, Belle Harbor, NY 11694	Queens					
Morgan Stanley Dean Witter Income Securities	Finance	4-6 (and WTC 2)	325,200	3,700 (at WTC 2 and 5)/6 lost	moved to 75 Varick St. and 1221 6th Ave. (5-year sublets); has offices at 1585 and 1633 Broadway, 750 7th Ave., Pierpont Plaza in Brooklyn, and 34 Exchange Pl., Jersey City, NJ 07311; bought the former Texaco headquarters in Harrison, NY	Downtown, Midtown, Brooklyn, New Jersey and Westchester	Varick St.: 245,874; 1221 6th: 282,584; 1633 Broadway: 62,000; Jersey City: 66,177; Harrison, NY: 725,000 (107 acres)	14,000 in NY/NJ offices (incl. 500 at 825 Third Ave. and 600 in Jersey City); 2,000-3,500 to move to Harrison, NY; fired 200	www.morganstanley.com		tel (888) 883-4391 and Karen Dennehy at (201) 938-6010
New York State Court of Claims	Government	8	24,909		moved to 71 Thomas St, NY, NY 10013; will relocate to 26 Broadway, NY, NY 10004	Downtown	Broadway: 37,275		www.nyscourtofclaims.state.ny.us		tel (646) 386-3804 and (518) 432-3448
Our Planet Management Institute, Ltd. / RY Trading	Personal Services	9, Suite 9251	5,500		moved to 333 Pearl Street, Suite 4M, NY, NY 10003	Downtown			www.opmi.org	Lisa Lin at lisa@opmi.org or info@opmi.org	
Paul Snisky	N/A				moved to 42 Broadway, NY, NY 10004	Downtown					
Perfumeria Milano	Retail / Wholesale	308 CNCR	1,200		moved to 515 West 20th Street, 6th floor, NY, NY 10011	Valley				Alan Kenig at mattesenycakenig@aol.com	
Richard Marchitto	N/A				moved to 111 Broadway, NY, NY 10006	Downtown					
Rusciano Productions	N/A				temp. moved to 142 East 27th Street, Apt. 4, NY, NY 10016	Midtown					
Sam Goody	Retail / Wholesale	CNCR	4,000		moved to other NYC locations	New York			www.samgoody.com		
Satellite Airline Center	Transportation				moved to 110 East 59th Street, NY, NY 10022	Midtown				Albert Young at sat9290@aol.com	
The Charles Schwab Corporation	Finance	CNCR			moved to other NYC locations; can be contacted at Orlando Operations Center, P.O. Box 628291, Orlando, FL 32862	New York			www.charlesschwab.com		tel 1-800-435-4000
US Airways	Transportation		400		moved to other NYC locations	New York			www.usairways.com		tel (703) 872-7000

5 World Trade Center -
Northeast Plaza

Tenant	Industry	Floor	Square Feet Leased	Employees	Status	Destination	New Square Footage	New Employment	Website	Email	Phone / Fax
VRH Construction Corp.	Construction	24, Suite 2449A	1,000	80 (total, few at WTC office)	has gone out of business	N/A					tel (201) 871-4422, fax (201) 871-6727
World Trade Center Dental Group P.C. Inc.	Health Care	3, Suite 367A	4,500		moved to 111 Broadway, 17th floor, NY, NY 10006	Downtown			www.wtcdentalgroup.com	wtcdentalgroup@aol.com	tel (212) 233-9445 and 233-9446
Total Sq. Ft.			783,520								

**6 World Trade Center - U.S.
Customs House**

Tenant	Industry	Floor	Square Feet Leased	Employees	Status	Destination	New Square Footage	New Employment	Website	Email	Phone / Fax
Bureau of Alcohol, Tobacco and Firearms	Government	2 and 6, Suite 600	1,200		moved to 300 Coffey Street, Brooklyn, NY 11231	Brooklyn		200	www.atf.treas.gov/field/newyork/index.com		tel (718) 254-7845, fax (718) 254-7870
Eastco Building Services	N/A				moved to 130 Brook Ave., Deerpark, NY 11729	Suffolk			www.eastco.com	Nancy Avitable at nancyavitable@eastco.com	
Small Business Administration / Export-Import Bank / U.S. Export Assistance Center	Government	6, Suite 635	4,500		moved to 26 Federal Plaza, Room 3100, New York, NY 10278	Downtown		50	www.sba.gov and www.nyuseac.org	Herbert Austin at herbert.austin@sba.gov	tel (212) 264-2454
U.S. Consumer Product Safety Commission	Government	3, Room 350	3,300	5	moved to 201 Varick St, Room 903, NY, NY 10014	Valley		5	www.cpsc.gov	bschwartz@cpsc.gov	tel (212) 620-4120, fax (212) 620-5338
U.S. Customs Service / Custom House	Government				moved to 1 Penn Plaza, fl 10-11, NY, NY 10121 (10-year lease) and 601 West 26th Street, NY, NY 10001	Valley	Penn Plaza: 117,848; 26th St: 75,000		www.custom.gov		Amos Gwasi at (646) 733-3220 and (212) 264-9271
U.S. Department of Agriculture / AAPHIS	Government	2			can be contacted at 1400 Independence Ave. SW, Washington, DC 20250	N/A			www.usda.gov	oc.news@usda.gov	Kevin Herglotz at tel (202) 720-4623
U.S. Department of Commerce / Commerce Department International Trade Administration	Government	6, Suite 635	4,500		no new address given	Uptown			www.ita.doc.gov		tel (212) 880-6200 and 1-800-USA-TRADE, fax (202) 482-4473
U.S. Department of Labor - Pension and Welfare Benefits	Government	6	10,200		temp. moved to 201 Varick St, NY, NY 10014	Valley			www.dol.gov		(212) 337-2228 and 337-2636
Total Sq. Ft.			537,693								

7 World Trade Center

Tenant	Industry	Floor	Square Feet Leased	Employees	Status	Destination	New Square Footage	New Employment	Website	Email	Phone / Fax
American Express Bank International	Finance	7, 8, and 13	106,117	5,000 (total employment)	temp. leased space at 5 Wood Hollow Drive/Road, Parsippany, NJ, 07054, 101 JFK Parkway, Short Hills, NJ, 07078, 400 Atlantic Street, Stamford, CT. 06901, and in Weehawken, NJ; returned to 3 WFC and will stay at 90 Hudson St., Jersey City, NJ 07302, and 40 Wall Street	Downtown and New Jersey	Parsippany, NJ: 317,040; Short Hills, NJ: 195,000; Stamford, CT: 190,138	WFC 3: 3,500	www.americanexpress.com		Jeff Furman at tel (201) 209-3258
Aramark	Concessions	CNCR (also WTC 1 and 2)		7 lost (total)	no new address given, but plans to return to the site when rebuilt	Downtown			www.aramark.com		tel (215) 238-3000 and 1-800-934-4598 (employee info)
Cohen & Goldstick	Law				moved to 2 Park Ave, New York, NY 10016	Midtown					tel (212) 553-8300, fax (212) 553-8721
Diane R. Mirabito	Law				moved to 1600 Stewart Ave, Westbury, NY 11590	Nassau					tel (516) 688-1709
Federal Home Loan Bank of New York Inc.	Finance	22	47,490		temp. moved to 200 Park Avenue, New York, NY 10016; also operating from existing location at 30 Montgomery Street, Jersey City, NJ 07302	Midtown and New Jersey			www.fhlbny.com		tel (212) 294-1800, fax (212) 294-6701
First State Management Group, Inc	Insurance	21	4,000		moved to 2 Park Ave., NY, NY 10016	Midtown	4,000	20	www.firststateins.com		in Boston: tel (617) 526-7600, fax (617) 526-0600
Internal Revenue Service Regional Council	Government	24-25	90,430		temp. moved to 290 Broadway, 9th floor, NY, NY 10007; will move to 2 Federal Reserve Plaza, fls. 12 and 14, NY, NY	Downtown	43,988		www.irs.gov		tel (212) 298-2000 and 436-1000
ITT Hartford Insurance Group	Insurance	19-21	122,590	325	moved to 2 Park Ave., NY, NY 10016	Midtown	150,000	325	www.thehartford.com		tel 1-800-343-6655
Laura V. Yeu Eng	Law				temp. moved to 233 Broadway, NY, NY 10007	Downtown					tel (646) 428-1944
MJ's & Lisa's Lobby Stores Inc.	Retail				may be contacted at 7500 Fourth Ave., Apt D-3, Brooklyn, NY 11209	Brooklyn					
NAIC Securities / National Association of Insurance Commissioners / Securities Valuation Office	Insurance	19	22,500	45	moved to 9 Times Square, 9th floor, NY, NY 10036 (2-year lease)	Midtown	18,000	52	www.naic.org	Elenore Sottilaro at esottila@naic.org	tel (212) 398-9000, fax (212) 382-4207
New York City Mayor's Office of Emergency Management	Government	23	45,815		temp. facility at Pier 92 was deactivated on Nov. 23, 2001; no new address given	N/A	Pier 92: 75,000		www.nyc.gov/html/oem/home.html		tel (646) 756-3001, fax (212) 245-0666
Provident Financial Management	Investments	7 and 13	9,000		may have relocated to one of many Midwest offices	Midwest?			www.provident-financial.com		tel 1-800-335-2220
Salomon Smith Barney Inc. / Citigroup	Finance	1-6, 13, and 18-46	1,202,900	2,500	backfilled existing space in Midtown, Rutherford, NJ and at 100-300 Stamford Place, Stamford, CT; subleasing space at 125 Broad Street, NY, NY 10004	Midtown, New Jersey and Connecticut	Stamford, CT: 235,000; Broad St: 330,000	Stamford, CT: 800	www.salomonsmithbarney.com and www.citigroup.com		tel (212) 816-6000 and (866) 256-4154
Standard Chartered Bank	Finance	10, 13, 26, and 27	111,398	473/0 lost	temporarily operating from 1 Evertrust Plaza, Suite 1101, 11th floor, Jersey City, NJ 07302, and 1 Madison Ave., NY, NY 10010	New Jersey and Valley	Jersey City: 100,000; Madison Ave.: 92,000		www.standardchartered.com		Guy Smith-Langridge at tel (914) 545-2814
U.S. Equal Employment Opportunity Commission	Government	18	6,000	0 lost	temp. moved to 201 Varick Street, Suite 1009, NY, NY 10014; attempting to secure space in Manhattan	Valley		98	www.eeoc.gov		Varick Street: tel (212) 741-8815 and 741-2783, and Newark: tel (973) 645-5974 and 645-3727
U.S. Secret Service	Government	9-10	85,343		moved to 335 Adams Street, 32nd floor, Brooklyn, NY 11201	Brooklyn	92,210		www.secretservice.gov and www.ustreas.gov/usss/index.shtml		tel (718) 722-0712
U.S. Securities & Exchange Commission	Government	11-13, Suite 1300	106,117	350/0 lost	moved to the Woolworth Building, 233 Broadway, floors 11 and 13-16, NY, NY 10279 (10-year lease)	Downtown	139,045	350	www.sec.gov		tel (646) 428-1500 and (202) 942-0020
Total Sq. Ft.			2,000,000								

1 World Financial Center

Tenant	Industry	Floor	Square Feet Leased	Employees	Status	Destination	New Square Footage	New Employment	Website	Email	Phone / Fax
Battery Park City Authority	Government				returned to WFC 1	Downtown			www.batteryparkcity.org	info@bpcauthor.org	tel (212) 417-2000, fax (212) 417-2001
Cargill Investor Services, Inc.	Investments		11,000	43/0 lost	operating from Mount Holly, Port Elizabeth, and Bridgewater, NJ; may be reached at main office: P.O. Box 9300, Minneapolis, MN 55440; plans to return to WFC 1	Downtown			www.cargill.com		tel (media) (952) 742-6000; in MN: tel (952) 742-7575
Chiao Tung Bank NY Agency	Finance		10,000		returned to WFC 1	Downtown			www.ctnbank.com.tw/english.htm		
CIBC World Markets	Finance		500,000		relocated to 425 Lexington Avenue, 622 Third Ave (CMGI sublease) and 417 Fifth Ave., NY, NY; plans to occupy new headquarters at 300 Madison Ave, NY, NY 10017, in 2004	Midtown	3rd Ave: 150,000; 5th Ave: 130,000		www.cibcwm.com		Lex. Ave: tel (212) 856-4000
Dain Rauscher RBC	Investments		26,000		temp. moved to 3 Times Square; expects to return to 1 WFC	Downtown			www.rbcdain.com		tel (212) 315-8900 and 1-800-446-2337, fax (212) 315-8979
Deloitte & Touche	Consulting	(also in WFC 2)	75,000		temp. relocated to 1633 Broadway, the Marriott Marquis Hotel, and 11 Broadway, NY, NY; returned to WFC 2 and expects to return to WFC 1 by mid-2002	Downtown		1633 Broadway: 1,000; Marriott Hotel: 600; 11 Broadway: 150	www.deloitte.com		tel (212) 436-2000 and Steve Silversteen at (973) 683-6036, fax (212) 436-7007/5000
De Vos & Co.	Law		15,000		joined Hill, Betts & Nash at 99 Park Ave., 20th floor, NY, NY 10016	Midtown					Robert Anderson at tel (212) 839-7000, fax (212) 466-0514
Dow Jones & Co.	Business Services	9-16	300,000	770	temp. relocated to 4300 North Route 1, South Brunswick, NJ, 34 Exchange Place, Jersey City, NJ 07311, and other Manhattan locations; returning to WFC 1, but may sublet 150,000 sf	Downtown		WFC 1: 425; South Brunswick, NJ: 235; Jersey City, NJ: 40; other Manhattan: 70	www.dowjones.com		Steve Goldstein at tel (609) 520-4110
Fidelity Investments National Financial Services Corp.	Investments		208,000		temp. operating from existing offices in Carlstadt, NJ, Merrimack, NH, and Boston, MA; will occupy space at WFC 1 in 2003 (except for sublease of 64,000 sf) and at the Harborside Financial Center in Jersey City, NJ by mid-2002	Downtown and New Jersey	WFC 1: 144,000; Jersey City: 113,000		www.fidelity.com	mediarelat@fmr.com	tel (media) (617) 563-5800
French American Bank / BNP Paribas	Finance		60,000		employees began to move to 787 7th Ave., NY, NY 10019, and 919 Third Ave., NY, NY 10022, one month before the attack	Midtown					
Gabriele, Hughlin & Cashman / Tucker Anthony Inc. / RBC Dain Rauscher (as of 3/8/02)	Investments		30,000		operating from existing offices at 666 Fifth Ave., NY, NY 10103, Jersey City, NJ, and Stamford, CT	Midtown, New Jersey and Connecticut			www.tuckeranthony.com and rbcdain.com	connectdesk@rbcdain.com	tel 1-888-281-4094
National Financial Services Corporation	Investments		193,000	750	relocated within New York	New York					
New York Plaza Florist	Personal Services	(also in 22 Liberty Street)	1,000	6	moved to WFC 4 and 250 Vesey Street, NY, NY 10281	Downtown			www.nyplazaflorist.com	Bill Anastasakis at nyplazaflorist@aol.com	tel 1-800-968-7113 and (212) 968-0032
Optometric Arts Limited	Personal Services				moved to 200 Liberty Street, NY, NY 10281, and 1441 56th Street, NY, NY	Downtown and Midtown					in WFC: tel (945)-3498
Plus One Fitness Clinic	Personal Services				moved to headquarters at 322 Eighth Ave., 6th floor, NY, NY 10001	Valley			www.plusone.com	general_info@plusone.com	tel (212) 866-0950, fax (212) 866-0982

1 World Financial Center

Tenant	Industry	Floor	Square Feet Leased	Employees	Status	Destination	New Square Footage	New Employment	Website	Email	Phone / Fax
Refco Funds Holding	Finance	22	60,000		returned to WFC 1	Downtown			www.refco.com	Jennifer Gomberg at jgomberg@refco.com	tel (212) 693-7747
Starbucks Coffee	Concessions				returned to WFC 1	Downtown			www.starbucks.com		in WFC: tel (212) 587-9512
Storage Technology	Business Services		30,000		returned to WFC 1	Downtown					
Total Sq. Ft.			1,461,365								

2 World Financial Center

Tenant	Industry	Floor	Square Feet Leased	Employees	Status	Destination	New Square Footage	New Employment	Website	Email	Phone / Fax
ABN AMRO	Finance		15,000	0 lost	temp. moved to 1290 Ave. of the Americas, NY, NY; plans to return to WFC 2	Downtown			www.abnamro.com		tel (media) 31 20 628 89 00
Ann Taylor Stores Corporation	Retail	Lobby (and WTC 1)			relocated to other NYC stores	New York			www.annaylor.com		in WFC: tel (212) 945-1991
AuthentiDate	Computer Services		2,500	25	returned to WFC 2	Downtown	2500	25	www.authentidate.com	Patrick Lang at plang@authentidate.com and media@authentidate.com	tel (212) 279-2275, fax (212) 279-2296
BondBook Holdings LLC	Investments			62	relocated within New York	New York			www.bondbook.com		
Commerzbank	Finance		160,000	400	relocated to a disaster recovery site at 555 Theodore Fremd Avenue, Suite B-200, Rye, NY 10580; temp. returning to 2 WFC (8-month lease)	Downtown	160,000	400	www.commerzbank.com		Andrew Brant at tel (212) 266-7551
Deloitte & Touche	Consulting		500,000 (also in WFC 1)	ca. 1,750 (in WFC 1 and WFC 2)	temp. relocated to 1633 Broadway, the Marriott Marquis Hotel, and 11 Broadway, NY, NY; returned to WFC 2 and expects to return to WFC 1 by Spring 2002 (but may sublet 100,000 sf)	Downtown		1633 Broadway: 1,000; Marriott Hotel: 600; 11 Broadway: 150	www.deloitte.com		tel (212) 436-2000 and Steve Silversteen at (973) 683-6036, fax (212) 436-7007/5000
Elixir Juice Bar	Concessions	Lobby			will return to WFC 2	Downtown					
Fuji Securities / Mizuho Financial Group	Investments				temp. moved to Princeton, NJ; will move to Waterfront Corporate Center, 11th floor, Hoboken, NJ on June 29, 2002	New Jersey	37,000		www.fujibank.co.jp		tel (212) 880-7160
Gap Kids	Retail	Lobby			relocated to 1 of many NYC stores	New York			www.gapkids.com		in WFC: tel (212) 945-4090
Georgiou	Retail	Lobby			temp. moved to Roosevelt Field Mall, Garden City, NY, 11530; will return to WFC 2 in Spring 2002	Downtown			www.georgioustudio.com		tel (415) 554-8000
Gov PX Inc.	Investments	26	10,000	25	returned to WFC 2	Downtown	10000	25	www.govpx.com		tel (212) 693-1207, fax (212) 786-0022
Legs Beautiful	Retail	Lobby			will return to WFC 2; may be reached at headquarters: 1903 Leslie Street, Toronto, Canada M3B 2M3	Downtown			www.legsbeautiful.com	info@legsbeautiful.com	tel (212) 945-2858
Man Group USA / Man Financial	Finance	27	40,000		returned to WFC 2; negotiating for space in Midtown	Downtown			www.mangroupplc.com and www.manfinancial.com	Ira Polk at ipolk@mangroupplc.com and ny@manfinancial.com	tel (212) 589-6200, fax (212) 589-6215
Merrill Lynch & Co. Inc.	Finance		1,200,000	3,500 (another 1,500 displaced)	backfilling space in Hopewell, NJ (8 office towers), 101 Hudson Street, Jersey City, NJ, 07302, 222 Broadway, NY, NY 10038, and other NJ and NY sites; some employees returned to WFC 2 and 4 (though subleasing ca. 470,000 sf at WFC 2)	New Jersey and Downtown	Hopewell, NJ: 1,250,000; 222 Broadway: 480,000; 2 WFC: 800,000	222 Broadway: 300 employees added; WFC 4: 6,000; WFC 2: 2,000	www.merrilllynch.com and www.ml.com	Carol Kane at carol_kane@ml.com	Francisco Linton at tel (201) 557-1018
Mimi Maternity	Retail	Lobby			relocated to 1 of 3 NYC stores	New York			www.mimimaternity.com		in WFC: tel (212) 945-6424
Montmarte	Retail	Lobby			will return to WFC 2	Downtown					Moshe Toledo at tel (917) 838-6551 and (212) 945-7858
Mrs. Beasley's Gifts from the Bakery	Concessions	Lobby			moved to 1 of 7 California offices, incl. headquarters at 16805 S. Central Avenue, Carson, CA 90746	California			www.mrsbeasleys.com		tel (310) 688-2400, fax (310) 688-2148
Nomura Securities	Investments	17-20	350,000	945	returned to WFC 2	Downtown		800	www.nomura.co.jp/e/index.htm		Park Ave.: tel (212) 836-7130, fax (212) 836-7839
P2Q Solutions	N/A				relocated within New York	New York					
Partner Reinsurance	Insurance	43	36,000	140	temp. moved to One Greenwich Plaza, Greenwich, CT 06830-6352	Connecticut			www.partnerre.com	Celia Powell at celia.powell@partnerre.com	tel (203) 485-4200, fax (203) 485-4300
Results Securities	Investments	43			returned to WFC 2	Downtown			www.resultssecurities.com	Richard Sisselman at rsisselman@resultssecurities.com	tel 1-800-285-7514, fax (212) 298-5858
Rosemarie R. McCloy	Law				moved to 225 Broadway, Suite 307, NY, NY 10007	Downtown					
South West New York / South West NY Take Out	Restaurant	CNCR	13,000		returned to WFC 2	Downtown	13000		www.merchantsny.com/indexsw.html		tel (212) 945-0528
Urban Athletics LLC	Retail				moved to 29 Broadway, NY, NY 10006	Downtown					tel in WFC: (212) 267-2247

2 World Financial Center

Tenant	Industry	Floor	Square Feet Leased	Employees	Status	Destination	New Square Footage	New Employment	Website	Email	Phone / Fax
Yasuda Fire & Marine / Mizuho	Insurance		27,000		returned to WFC 2	Downtown			www.yasuda.co.jp/english/		
Total Sq. Ft.			2,591,244								

3 World Financial Center

Tenant	Industry	Floor	Square Feet Leased	Employees	Status	Destination	New Square Footage	New Employment	Website	Email	Phone / Fax
American Express	Finance	1, 2, 22, 23, and 30-51 (and 140 Broadway)	1,120,500	5,000 (in 3 WFC and 140 Broadway)	temp. leased space at 5 Wood Hollow Drive, Parsippany, NJ, 07054, at 101 JFK Parkway, Short Hills, NJ, 07078, at 400 Atlantic Street, Stamford, CT, 06901, and in Weehawken, NJ; will return to WFC 3 in April, 2002, and will stay at 1185 6th Ave., NY, NY and 40 Wall Street, NY, NY	Downtown, Midtown and New Jersey	Parsippany, NJ: 317,040; Shorthills, NJ: 195,000; Stamford, CT: 190,138; 3 WFC: 868,992; 1185 6th: 132,500; 40 Wall: 139,135	WFC 3: 3,500	www.americanexpress.com		Jeff Furman at tel (201) 209-3258
Bridge Information Systems / Reuters	Business Services		70,000		employees relocated to Reuters' buildings at 3 Times Square, NY and in White Plains, NY; intends to return to WFC 3	Downtown			www.reuters.com and www.bridge.com	nysa@bridge.com	
Images Hairstylists Ltd.	Personal Services	CNCR			no new address given	N/A				Joseph Cione at tjd119@aol.com	
Lehman Brothers	Finance	2, 4-21, and 24-26 (also in WTC 1)	1,030,800	5,000	leased 70 Hudson Ave., Jersey City, NJ (Datek building), 399 Park Ave, fls. 5-6, 8-9, 11, 15-16 (15-yr lease), and 85 10th Ave., NY, NY; purchased Morgan Stanley's office tower at 745 7th Avenue	New Jersey, Midtown and Valley	Hudson Ave: 150,000; Park Ave.: 450,000; 10th Ave.: 56,000; 7th Ave.: 1,000,000	5,000	www.lehman.com		William Ahearn at tel (201) 524-2241
Sorella New York	N/A				moved to 109 Bethel Road, Albertson, NY 11507	Nassau				Barbara Gordon at barbiesorella@aol.com	
Zurich-American Insurance Group	Insurance	(also in 1 Liberty Plaza)	70,818		temp. moved to 601 W. 26th Street, NY, NY 10001, 105 E. 17th Street, NY, NY, and 1 Upper Pond Road, Building E-F, Parsippany, NJ; expects to return to 1 Liberty Plaza in 2002	Valley, New Jersey and Downtown	26th St: 135,000; 17th St.: 75,000; Parsippany, NJ: 9,000; 1 Liberty Plaza: 215,000	26th St: 230; 17th St: 250; Parsippany, NJ: 110	www.zurich.com		
Total Sq. Ft.			2,300,000								

4 World Financial Center

Tenant	Industry	Floor	Square Feet Leased	Employees	Status	Destination	New Square Footage	New Employment	Website	Email	Phone / Fax
California Burrito	Restaurant	Lobby			returned to WFC 4	Downtown			www.californiaburrito.com		
Faber, Coe & Gregg Newstand	Retail	Lobby		3	returned to WFC 4	Downtown		3			Robert Rubin at tel (212) 406-3955
Hudson River Club / Edward Moran Bar & Grill	Restaurant	Lobby			returned to WFC 4	Downtown			www.hudsonriverclub.com		tel (212) 786-1500
Market Bar	Concessions	Lobby			will return to WFC 4	Downtown					tel (212) 945-3842
Merrill Lynch	Finance	ALL (and WFC 2)	2,060,000	4,500 (another 1,500 displaced)	backfilling space in Hopewell, NJ (8 office towers), 101 Hudson Street, Jersey City, NJ, 07302, 222 Broadway, NY, NY and other NJ and NY sites; some employees returned to WFC 2 and 4	New Jersey and Downtown	Hopewell, NJ: 1,250,000; 222 Broadway: 480,000; 2 WFC: 800,000	222 Broadway: 300 employees added; 4 WFC: 6,000; 2 WFC: 2,000	www.merrillynch.com and www.ml.com	Carol Kane at carol_kane@ml.com	Francisco Linton at tel (201) 557-1018
Steinway & Sons	Manufacturing		1,000	1	has not reopened	N/A	0	0	www.steinway.com	info@steinway.com	tel 1-800-366-1853
Total Sq. Ft.			2,083,555								

Winter Garden

Tenant	Industry	Floor	Square Feet Leased	Employees	Status	Destination	New Square Footage	New Employment	Website	Email	Phone / Fax
American Express Axis ATM and Ticketing Book	Finance	Courtyard			no new address given	N/A			www.americanexpress.com		
American Express Travel Service	Travel Agency	Courtyard			may have moved employees to 1 of 5 other NYC offices	New York			www.americanexpress.com		tel (212) 640-5130
Au Bon Pain	Concessions	Courtyard			relocated to 1 of several other NYC locations	New York			www.aubonpain.com		tel in WFC: (212) 766-9844
Au Mandarin / Au Mandarin Take Out	Restaurant	Courtyard	5,000		moved to 200 Vesey Street, NY, NY 10285	Downtown	5,000		www.kerrymenu.com/au-mandarin.html		tel (212) 385-0313
Barclay-Rex Tobacconist	Retail	Courtyard			may have moved to headquarters at 75 Broad Street, NY, NY 10004	Downtown			www.barclavrex.com		tel (212) 962-3355, fax (212) 962-3372
Cobbler Express / Stanley's Cobbler Shop	Personal Services	Courtyard			moved to 11 Thames Street, NY, NY 10006 and 115 Broadway, NY, NY 10006	Downtown				Carmine Colletti at ccoll6241@aol.com	tel (212) 945-3414
Colortek Kodak Image World	Personal Services	Courtyard			relocated within New York	New York			www.kodak.com		
Columbus Bakery	Concessions	Courtyard			relocated to its Upper West Side location?	Upper West Side					in WFC: tel (212) 945-9404
Cosi Sandwich Bar	Concessions	Courtyard			relocated to other NYC locations	New York					in WFC: tel (212) 571-2001
Custard Beach	Concessions	Courtyard			will return to the Winter Garden	Downtown			www.custardbeach.com		tel (212) 786-4707
Donald Snacks / Donald Snacks Take Out	Restaurant / Concessions	Courtyard			will return to the Winter Garden	Downtown					tel (212) 619-4600
Eastern Newsstand / Eastern Lobby Shops	Retail	Courtyard			relocated within New York	New York					tel (212) 945-3667
Foxhounds Restaurant / Foxhounds Take Out / Manjo Restaurant Inc.	Restaurant	Courtyard		15	will return to the Winter Garden	Downtown					tel (212) 385-6199
Genki Sushi	Concessions	Courtyard			will return to the Winter Garden	Downtown					tel (212) 945-3096
Godiva Chocolatier	Concessions	Courtyard			will return to the Winter Garden	Downtown			www.godiva.com		
Grill Room	Restaurant	Courtyard			will return to the Winter Garden	Downtown					tel (212) 945-9400
Hallmark Gold Crown	Retail	Courtyard			relocated to 1 of many NYC stores	New York			www.hallmark.com		tel (212) 766-1860
H2O Plus	Retail	Courtyard	600	5	relocated to other NYC stores	New York			www.h2oplus.com		tel (212) 750-8119
Johnney's Fish Grill / Johnney's Take Out	Restaurant	Courtyard			will return to the Winter Garden	Downtown					tel (212) 385-0333
Joon Pen Shop	Retail	Courtyard			moved to 782 Lexington Ave., NY, NY 10021	Upper East Side			www.joon.com		tel (212) 935-0017
Joseph Cione Full Service Salon for Men & Women	Personal Services	Courtyard			moved to 1271 Sixth Ave., Concourse level, NY, NY	Midtown					tel (212) 608-4900
Sunglass Hut / Watch Station	Retail	Courtyard		4	moved to 225 Liberty Street, NY, NY 10281	Downtown		4	www.sunglasshut.com		tel (212) 786-4124
Tahari	Retail	Courtyard			moved to 1 of 4 Brooklyn locations	Brooklyn			www.tahari.com		in WFC: tel (212) 945-2450
Total Sq. Ft.			95,446								

101 Barclay Street

Tenant	Industry	Floor	Square Feet Leased	Employees	Status	Destination	New Square Footage	New Employment	Website	Email	Phone / Fax
Bank of New York	Finance	all	1,226,000 (also in 100 Church and 75 Park Place)		leased temp. space in 17 NYC locations incl. 63 Madison Ave., 620 Ave. of the Americas, 1290 Ave. of the Americas, 5 Penn Plaza, 330 West 34th St, and 111 8th Ave., as well as 15 Broad St. (15-month lease); may be reached at headquarters: One Wall Street, NY, NY 10286; expects to return to 101 Barclay and 75 Park Place when repaired	Downtown	17 locations: 800,000 incl. 63 Madison: 113,572, and 620 Ave. of the Americas: 74,425; Broad Street: 800,000		www.bankofnewyork.com and www.bankofny.com		headquarters: tel (212) 495-1784
Total Sq. Ft.			1,226,000								

111 Broadway

Tenant	Industry	Floor	Square Feet Leased	Employees	Status	Destination	New Square Footage	New Employment	Website	Email	Phone / Fax
Allegaert Berger & Vogel LLP	Law		3000	20	returned to 111 Broadway, NY, NY	Downtown	3,000	20	www.abandv.com and www.abv.com	firm@abv.com	tel (212) 571-0550, fax (212) 571-0555
Aulden Cellars	Retail / Wholesale				moved to 95 Trinity Place, NY, NY 10006	Downtown				Evan Baumgarten at pindex@aol.com	
Bishop, Rosen and Co., Inc.	Investments	14	10,799		returned to 111 Broadway, NY, NY	Downtown					
Broad Street Advisors LLC	Real Estate	11	4,500	11	returned to 111 Broadway, NY, NY	Downtown	4,500	11	www.broadstreetadvisors.com	Frederick Ellsworth at fellsworth@broadstreetadvisors.com	tel (212) 315-2400, fax (212) 315-1171
Business Technology Partners	Technology	18	1,800	10	returned to 111 Broadway, NY, NY	Downtown	1,800	10	www.btpartners.com and www.btp.net	feedback@btpartners.com	tel (646) 485-1800
CCN LLC / Conference Call Notes LLC	Computer Services	14, Suite 1405			returned to 111 Broadway, NY, NY	Downtown			www.ccnsorce.com	Jason Jobe at jason@ccnsorce.com	tel (212) 931-6515
Cuttone Corporation	Investments		3,000	28	returned to 111 Broadway, NY, NY	Downtown	3,000	28			tel (212) 374-9797
ETG Co.	N/A				moved to 900 Third Ave., NY, NY 10022	Midtown					
First Options of Chicago, Inc. / Spear Leeds & Kellogg	Finance	2	21,600		returned to 111 Broadway, NY, NY	Downtown	21,600		www.foc.com		tel (212) 346-7006 and 1-800-922-5713
Fowler, Rosenau & Geary, LP	Finance	19	10,000		has not announced plans	N/A					
Gersowitz, Libo & Korek	Law	12			relocated within NYC	New York					
Israel A. Englander	Law				relocated within NYC	New York					
Jeffrey R. Shapiro DDS / Richard Marchitto	Health Care	17			returned to 111 Broadway, NY, NY	Downtown				Jeffrey Shapiro at jshapi99@aol.com	
Jerry S. Goldman & Associates	N/A	13			relocated within NYC	New York					
Karne Spoko	N/A				moved to 10006 zip code	Downtown					
Kenneth L. Aron	Law	13			returned to 111 Broadway, NY, NY	Downtown				Kenneth Aron at ken.aron@att.net	
K G Munch Box	Concessions	1			relocated to other NYC locations	New York					
LIT Financial / Spear Leeds & Kellogg	Finance	7	14,000		returned to 111 Broadway, NY, NY	Downtown	14,000				
Lower Manhattan Medical Associates	Health Care				moved to 10006 zip code	Downtown					
Mahoney & Keane LLP	Law	10		13	returned to 111 Broadway, NY, NY	Downtown		13	www.mahoneykeane.com	Karen Sopko at lawoffices@mahoneykeane.com	tel (212) 385-1422
Mark E. Seitelman Law Offices	Law	9			returned to 111 Broadway, NY, NY	Downtown				Mark Seitelman at seitelman@trial1.com	
Michael Daniel Sharp	Law	6, Suite 603			moved to 111 North 11th Street, Brooklyn, NY 11211	Brooklyn				Michael Sharp at sharpplaw@worldnet.att.net	
Mila Management Health Care	Health Care				returned to 111 Broadway, NY, NY	Downtown					
Network Information Solutions Inc.	Computer Services	7			returned to 111 Broadway, NY, NY	Downtown			www.nisol.com	Lee Larson at llarson@nisol.com and netinfos@nisol.com	tel (212) 943-0089, fax (212) 635-0982
Olga Sorkin PC	N/A	4			relocated within NYC	New York					
Phoenix Management Consultants Group	Consulting				no new address given	N/A			www.pmcgrp.com	Thomas Mule at tmule@pmcgrp.com	
Rocket Financial Technology	Business Services				relocated within NYC	New York					
Rolfe & Nolan / BSI	Computer Services	17	10,000	8	returned to 111 Broadway, NY, NY	Downtown	10,000	8	www.rolfeandnolan.com		tel (212) 240-0200, fax (212) 240-0214
Ronald Cohen	Law	13			returned to 111 Broadway, NY, NY	Downtown					
Rosenthal Collins Group	Investments	6		23	returned to 111 Broadway, NY, NY; may be reached at headquarters: 216 W. Jackson Blvd., Suite 400, Chicago, IL 60606	Downtown			www.rcgdirect.com		tel (212) 349-2500
S and P Realty Group LLC	Real Estate	20			no new address given	N/A				Paul Fruchthandler at sandprealty@yahoo.com	
Securities Dealing Systems / SDS	Business Services	6			returned to 111 Broadway, NY, NY	Downtown					
Stephen C. Cooper	Law				returned to 111 Broadway, NY, NY	Downtown					
Steven V. Podolsky PC	N/A	4			moved to 2057 Flatbush Ave., Brooklyn, NY 11229	Brooklyn				Steven Podolsky at podolskypc@aol.com	
Sylog Inc.	Computer Services	6			returned to 111 Broadway, NY, NY	Downtown			www.sylog.com	Tim Gamble at tgamble@sylog.com	tel (212) 385-0200, fax (212) 385-8027
Synergy Group LLC	N/A				relocated within NYC	New York					
Tanstaafi Research and Trading	Research	2	3,850	13	returned to 111 Broadway, NY, NY	Downtown	3,850	13	www.tanstaafi.net	David Palmer at dpalmer@tanstaafi.net	tel (212) 346-7322
The Robin Hood Foundation	Non-profit	19	14,291		moved to 826 Broadway, NY, NY 10003	Valley			www.robinhood.org		

111 Broadway

Tenant	Industry	Floor	Square Feet Leased	Employees	Status	Destination	New Square Footage	New Employment	Website	Email	Phone / Fax
The WEFA Group	Business Services				moved to 530 Fifth Ave., 7th floor, NY, NY 10036	Midtown			www.wefa.com		tel (212) 884-9500, fax (212) 884-9514
Thomas E. Durkin	Law				relocated within NYC	New York					
Tim Gamble	Law	6			relocated within NYC	New York					
Treacy Schaffel Mackey & Moore	Law	5			relocated within NYC	New York					
Triad Securities Corp. / Hoot Group Inc.	Investments	11, Suite 1125			returned to 111 Broadway, NY, NY	Downtown					
Trinity Managers International Inc.	Investments	7			no new address given	N/A				Barnett Rothenburg at trinitybr@aol.com	
Vona Information Systems	Computer Services				relocated within NYC	New York					
Wall Street Technology Group / Wall Street Correspondence Inc.	Computer Services	8 or 17			moved to 55 Broadway, 20th floor, NY, NY 10006	Downtown					
Warner Technology Investment	Investments	6	2,000	13	returned to 111 Broadway, NY, NY	Downtown	2,000	13	www.sdsmarketwatch.com	George Maragos at georgem@sdsmarketwatch.com	tel (212) 349-3300, fax (212) 349-3263
Wasserman Schneider Babb & Reed	Law	19			returned to 111 Broadway, NY, NY	Downtown			www.customs.com	wsbr@customs.com	tel (212) 619-1770, fax (212) 227-6734
White and Car Inc.	N/A	11, Suite 1100			returned to 111 Broadway, NY, NY	Downtown					
Ymerge.com	Investments				moved to 10006 zip code	Downtown			www.ymerge.com		
Zone Edit, Inc.	Business Services	11			returned to 111 Broadway, NY, NY	Downtown			www.zoneedit.com	Michael Krebs at newyorkbiz@zoneedit.com	fax (212) 271-1934
Total Sq. Ft.			418,000								

115 Broadway

Tenant	Industry	Floor	Square Feet Leased	Employees	Status	Destination	New Square Footage	New Employment	Website	Email	Phone / Fax
Banc One Capital Corp.	Finance				relocated to other NYC offices	New York			www.bankone.com		
FGIC / GE Capital	Insurance	5-11	126,000		temp. operating from 120 Long Ridge Road, Stamford, CT 06902, and permanently from 125 Park Ave., NY, NY 10017	Midtown and Connecticut		Stamford, CT: 364; Park Ave.: 140	www.fgic.com	Andrea Baron at andrea.baron@gecapital.com	tel (212) 312-3000 and 1-800-352-0001, fax (212) 312-3093
Gerald Kramer	N/A	17			no new address given	N/A				Gerald Kramer at globecongk@aol.com	
Greeley & Hansen	Engineering	21			returned to 115 Broadway, NY, NY	Downtown			www.greeley-hansen.com	Paul Haglund at phaglund@greeley-hansen.com	tel (212) 227-1250, fax (212) 227-1229
Liberatore Services	Business Services	12			returned to 115 Broadway, NY, NY	Downtown			www.libserv.com	info@libserv.com	tel (212) 378-0300 and 1-800-444-8072, fax (212) 378-0303
Marulli Associates	Law	14	7,500		returned to 115 Broadway, NY, NY	Downtown	7,500		www.marullilaw.com	Francesca Erichsen at ferichsen@marullilaw.com	
MLC International Investment Group	Finance				relocated to other NYC offices	New York			www.mlc.com.au		
Napoli Kaiser and Burns	Law	12	10,000	40	returned to 115 Broadway, NY, NY	Downtown	10000	40	www.napolikaiser.com	Gerold Kaiser at napolihomeoffice@aol.com and info@napolikaiser.com	tel (212) 267-3700 and 1-800-LAW-IN-NY, fax (212) 587-0031
OmniGuard / Omni Fine Art	Design	12			returned to 115 Broadway, NY, NY	Downtown			www.omnifineart.com	Thomas Cleveland at tcleveland@omnifineart.com	tel 1-800-666-4131 ext. # 236
Orion Capital	Finance				moved to Westchester	Westchester	2,500		www.orioncapital.com	Kevin Cassidy at energyorion@cs.com	Kevin Cassidy at tel (914) 945-8032
Pattison & Flannery	Law	20			no new address given	N/A				Thomas Pattison at patflan@aol.com	
Penny Travel Corp. / Travel Network	Travel Agency				moved to 120 Broadway, NY, NY 10271	Downtown			www.travelnetwork.com	115broadway@travelnetwork.com	tel (212) 732-3311, fax (212) 732-4529
Plural, Inc.	Computer Services	14, 16, and 18	55,400	190	returned to 115 Broadway, NY, NY	Downtown			www.plural.com		
Quadel	Non-profit	3			moved to 10006 zip code	Downtown			www.quadel.com		
RPR Correspondent Clearing	Finance				relocated within NYC	New York					
Toy Manufacturers of America	Non-profit			22	moved to 1115 Broadway, Suite 400, NY, NY 10010	Valley		22	www.toy-tia.org	info@toy-tia.org	tel (212) 675-1141
Transaction Information Systems / Starpoint Solutions	Computer Services	2 and 20-22	58,000		returned to 115 Broadway, NY, NY	Downtown			www.tisny.com and www.starpoint.com	ny_office@starpoint.com	tel (212) 962-1550, fax (212) 962-7175
Total Sq. Ft.			399,000								

140 Broadway

Tenant	Industry	Floor	Square Feet Leased	Employees	Status	Destination	New Square Footage	New Employment	Website	Email	Phone / Fax
American Capital Access Financial Guarantee Corp.	Insurance	47	15,000		returned to 140 Broadway, NY, NY	Downtown					
American Express	Finance	(and 3 WFC)	23,000	5,000 (in 3 WFC and 140 Broadway)	temp. leased space at 5 Wood Hollow Drive, Parsippany, NJ, 07054, at 101 JFK Parkway, Short Hills, NJ, 07078, at 400 Atlantic Street, Stamford, CT. 06901, and in Weehawken, NJ; will return to WFC 3 in April, 2002, and will stay at 90 Hudson St., Jersey City, NJ 07302 and 40 Wall Street, NY, NY	Downtown and New Jersey	Parsippany, NJ: 317,040; Shorthills, NJ: 195,000; Stamford, CT: 190,138	WFC 3: 3,500	www.americanexpress.com		Jeff Furman at tel (201) 209-3258
Anthony Capital Management	Investments	29			returned to 140 Broadway, NY, NY	Downtown					
Atlantic Mutual	Insurance		23,000	100	returned to 140 Broadway, NY, NY	Downtown	23,000	100	www.atlanticmutual.com		tel (212) 943-1800, fax (212) 428-6566
Brown Brothers Harriman	Finance		430,000	135/0 lost	temp. moved to 525 Washington Blvd., Jersey City, NJ 07310; will return to 140 Broadway in summer 2002	Downtown	430,000	Jersey City: 135	www.bbh.com		
Buchanan Ingersoll	Law	35	23,976	68	returned to 140 Broadway, NY, NY	Downtown	23,976	68	www.bipc.com		tel (646) 458-2340, fax (646) 458-2341
Computer Associates	Business Services	49	23,819	100	returned to 140 Broadway, NY, NY	Downtown	23,819	100	www.cai.com		tel (631) 342-6000, fax (631) 342-6800
Double Diamond Partners	N/A				returned to 10005 zip code	Downtown					
Employers Re	Insurance	45	10,442	22	in the process of moving to 1114 Ave. of the Americas, 33rd floor, NY, NY 10036 on 9/11	Midtown		6	www.gecapital.com		tel (212) 382-6207
Fife Waterfield Co.	Investments	46			returned to 140 Broadway, NY, NY	Downtown			www.fifewaterfield.com		tel (212) 858-7507
GE Capital	Finance	25	26,900		moved to existing offices at 125 Park Ave., NY, NY 10017	Midtown			www.gecapital.com	Andrea Baron at andrea.baron@gecapital.com	tel (212) 312-3000 and 1-800-352-0001, fax (212) 312-3093
Hayle Group Ltd.	N/A				returned to 140 Broadway, NY, NY	Downtown				Claudette Hayle at haylegroup@rcn.com	
HQ Global	Business Services	46 (and 1 Liberty Plaza)	23,967		returned to 140 Broadway and 1 Liberty Plaza, NY, NY	Downtown	23,967	5	www.hq.com and www.hqglobal.com		tel (212) 858-7500, fax (212) 858-7750
Indusval USA Corp.	Investments	46, Suite 4659			returned to 140 Broadway, NY, NY	Downtown			www.indusval.com.br	indusval@msn.com	tel (212) 858-7528, fax (212) 858-7741
Kelner & Kelner	Law	37			returned to 140 Broadway, NY, NY	Downtown					
Kirykos Kalketimidis	N/A				relocated within NYC	New York					
Level 3 Communications / Wells Fargo	Computer Services				relocated within NYC; may be contacted at PO Box 64854, St. Paul, MN 55164	New York			www.level3.com	investor.relations@level3.com	tel 1-877-585-8266; in MN: fax (720) 888-5085
Midland Investment Management	Investments				relocated to other HSBC branches in NYC	New York			www.midlandbank.com and www.hsbc.com		
Mitchell Bedell	N/A				relocated within NYC	New York					
MLC International Asset	Investments				relocated to other NYC offices	New York			www.mlc.com.au		
NAC Reinsurance / XL Capital Limited	Insurance	51, Suite 5105	11,500		returned to 140 Broadway, NY, NY	Downtown	7,000		www.nacre.com		tel (212) 820-6100, fax (212) 480-2992
Natsource Inc.	Finance	30	15,475		returned to 140 Broadway, NY, NY	Downtown			www.natsource.com	webmaster@natsource.com	tel (212) 232-5300, fax (212) 232-5353
Paine Webber	Finance	24	23,000	85	returned to 140 Broadway, NY, NY	Downtown	23,000	85	www.ubspainwebber.com	Peter Ambrose at peter.ambrose@ubspainwebber.com	tel (212) 607-3200 and 1-800-428-7784, fax (212) 607-3343
PG Corbin Co	N/A				relocated within NYC	New York					
Pinkerton Computer Consultants	Business Services	23	22,750	200	returned to 140 Broadway, NY, NY	Downtown	22,750	40	www.pcci.com		tel (212) 509-4500, fax (212) 425-1610
Round Noon	N/A				relocated within NYC	New York					
S & W Agency / Guardian Life Insurance	Insurance	22	23,000	70	returned to 140 Broadway, NY, NY	Downtown	23,000	70	www.glic.com		tel (212) 701-7900, fax (212) 363-6967
Schnader Harrison Segal & Lewis LLP	Law	31, Suite 3100		100	returned to 140 Broadway, NY, NY	Downtown		100	www.schnader.com	Francisco Maldonado at fmaldonado@schnader.com	tel (212) 973-8000, fax (212) 697-2847 and 972-8798
Shields & Co. / Shields Capital Corp.	Finance	44	23,000	80	returned to 140 Broadway, NY, NY	Downtown	23,000	80	www.shieldsandco.com	shieldsnyc@shieldsandco.com	tel (212) 320-3000, fax (212) 320-3040
Thales Fund Management	Finance	45	10,122		returned to 140 Broadway, NY, NY	Downtown	10,122				
Trading Edge / Market Access	Finance	42	23,967	100	returned to 140 Broadway, NY, NY	Downtown	23,967	100	www.tradingedge.com		tel (212) 813-6000, fax (212) 813-6340
Unisol Systems LLC	Computer Services	46			returned to 10005 zip code	Downtown			www.unisol.net?		

140 Broadway

Tenant	Industry	Floor	Square Feet Leased	Employees	Status	Destination	New Square Footage	New Employment	Website	Email	Phone / Fax
White, Fleischer & Fino	Law	36	23,626	70	returned to 140 Broadway, NY, NY	Downtown	23,626	70	www.wff-law.com	info@wff-law.com	tel (212) 487-9700, fax (212) 487-9777
William R. Connelly	N/A				relocated within NYC	New York					
Va Linux Systems	Computer Services				relocated within NYC; may be contacted at 47071 Bayside Parkway, Fremont, CA 94538	New York			www.valinux.com and www.vasoftware.com	info@vasoftware.com	tel 1-877-825-4689, in CA: fax (510) 226-8833
Visions Investments	Investments				returned to 140 Broadway, NY, NY	Downtown					
Vizacom	N/A				relocated within NYC	New York					
YMCA Retirement Fund	Non-profit	27-28	147,638		returned to 140 Broadway, NY, NY; may be reached at headquarters: 101 North Wacker Drive, Chicago, IL 60606	Downtown			www.ymca.net		in Chicago: tel (312) 977-0031
Total Sq. Ft.			1,200,000								

130 Cedar Street

Tenant	Industry	Floor	Square Feet Leased	Employees	Status	Destination	New Square Footage	New Employment	Website	Email	Phone / Fax
Amish Market	Retail / Wholesale	Ground			moved to existing location at 240 E. 45th Street, NY, NY 10017	Midtown					tel (212) 370-1761
David Comberg Design	Art	8			moved to 597 10th Street, Brooklyn, NY 11215	Brooklyn				David Comberg at comberg@earthlink.net	
E-2 Technical Inc.	Business Services		500	6	moved to 11 John Street, NY, NY 10038	Downtown	200	6			Efrain Rivera at tel (917) 686-7108
Kiss & Zwigard	Architecture		1200	3	moved to 120 Duane Street, NY, NY 10007	Downtown	1200	3	www.kiss-zwigard.com	Laszlo Kiss at laszlo@kiss-zwigard.com	tel (212) 732-0688, fax (212) 732-1064
Lisa Kiss Inc.	N/A				moved to 164 East Chardonay Drive, East Quogue, NY 11942	Suffolk					
Primar Typographers Inc. / Vigilant Picture Framing Inc. / Antony Vassal	Business Services				moved to 80 Washington Street, 3rd floor, NY, NY 10006	Downtown			www.primartype.com	Tony Vassallo at primartype@aol.com	tel (212) 558-6977
Rosenbloom & Hofflich	Legal				moved to 15 Maiden Lane, NY, NY 10038	Downtown					
Spiral Binding Company	Retail / Wholesale				moved to 350 Smoke Tree Business Park, North Aurora, IL 60542	Illinois			www.spiralbindings.com	Richard Alvino at mhansewicz@spiralbindings.com	tel (888) 824-6346, fax (888) 824-6347
Stillwell & Gladding	Health Care				moved to 11 Alpine Road, Yonkers, NY 10710	Westchester	1,500				Robert Maltese at tel (732) 246-2550
Tech Document Solutions Inc.	Business Services	9			moved to 80 East 11th Street, NY, NY 10003	Valley				Claudio Urena at curena1214@aol.com	
The UNZ Group	N/A	7 and 9			relocated within NYC	New York			www.unzgroup.com		
Total Sq. Ft.			135,000								

90 Church Street

Tenant	Industry	Floor	Square Feet Leased	Employees	Status	Destination	New Square Footage	New Employment	Website	Email	Phone / Fax
Boston Properties	Real Estate				moved to 599 Lexington Ave., Suite 1800, NY, NY 10022	Midtown			www.bostonproperties.com	Geoffrey Smith at gsmith@bostonproperties.com	Geoffrey Smith at tel (212) 326-4027, fax (212) 326-4050
Legal Aid Society	Law	13-15	146,760	450/0 lost	Civil Division has temp. moved to 166 Montague Street, Brooklyn, NY 11201, the Criminal Appeals Bureau and Juvenile Rights Division have temp. moved to 111 Livingston Street, Brooklyn, NY 11201, and the Criminal Defense Division and Executive Offices have moved to 49 Thomas Street, NY, NY 10013; Executive Offices will move to 49 Thomas Street, NY, NY	Downtown and Brooklyn			www.legal-aid.org		Civil Division: tel (718) 722-3100, fax (718) 722-3093; Criminal Appeals Bureau / Juvenile Rights Division: tel (718) 250-4219, fax (718) 250-4244; Criminal Defense Division / Executive Offices: Pat Bass at tel (212) 732-5000
Maria's Candy Store	Concessions				relocated within NYC	New York					
New York City Housing Authority	Government		450,000	1,800	returned to existing offices at 250 Broadway, NY, NY 10007; housed 90 Church Street employees at 90 Fifth Avenue and other existing offices; plans to return to 90 Church by summer 2004	Downtown	103,770		www.ci.nyc.ny.us/html/nycha/home.html		Douglas Apple at tel (212) 306-3000
Todd Adams	Law				may be reached at P.O. Box 3285, NY, NY 10008	Downtown					
Turner Construction	Construction				has not relocated	N/A			www.turnerconstruction.com and www.tcco.com	turner@tcco.com	tel (212) 229-6000, fax (212) 229-6390
United States Postal Service	Government				relocated within NYC	New York					tel (212) 330-5313
Total Sq. Ft.			950,000								

99 Church Street

Tenant	Industry	Floor	Square Feet Leased	Employees	Status	Destination	New Square Footage	New Employment	Website	Email	Phone / Fax
Eunet.com / KPNQ West	Computer Services				moved to 2180 Satellite Blvd., Suite 400, Duluth, GA 30097	Georgia			www.eunet.com		tel (678) 584-2124, fax (678) 584-2125
Moody's Investor Services	Publishing	2-11	268,000	140	returned to 99 Church Street, NY, NY	Downtown	268,000		www.moody's.com		tel (212) 553-7194, fax (212) 553-4820
Total Sq. Ft.			336,000								

100 Church Street

Tenant	Industry	Floor	Square Feet Leased	Employees	Status	Destination	New Square Footage	New Employment	Website	Email	Phone / Fax
American Express	Finance		55,000		temp. leased space at 5 Wood Hollow Drive, Parsippany, NJ, 07054, at 101 JFK Parkway, Short Hills, NJ, 07078, at 400 Atlantic Street, Stamford, CT, 06901, and in Weehawken, NJ; will return to WFC 3 in April, 2002, and will stay at 90 Hudson St., Jersey City, NJ 07302 and 40 Wall Street, NY, NY	Downtown and New Jersey	Parsippany, NJ: 317,040; Shorthills, NJ: 195,000; Stamford, CT: 190,138	WFC 3: 3,500	www.americanexpress.com		Jeff Furman at tel (201) 209-3258
Bank of New York	Finance		250,000 (also in 101 Barclay and 75 Park Place)		leased temp. space in 17 NYC locations incl. 63 Madison Ave., 620 Ave. of the Americas, 1290 Ave. of the Americas, 5 Penn Plaza, 330 West 34th St, and 111 8th Ave., as well as 15 Broad St. (15-month lease); may be reached at headquarters: One Wall Street, NY, NY 10286; expects to return to 101 Barclay and 75 Park Place when repaired	Downtown	17 locations: 800,000 incl. 63 Madison: 113,572, and 620 Ave. of the Americas: 74,425; Broad Street: 800,000		www.bankofnewyork.com and www.bankofny.com		headquarters: tel (212) 495-1784
Cardali and Cardali PC	Law	16, Suite 1610			moved to 140 Broadway, NY, NY 10007	Downtown					
Care in Network / Far Leap USA	Health Care				moved to 403 E. 90th Street, NY, NY 10128	Upper East Side					
CCA Construction Consulting Associates Inc.	Construction	16, Suite 1625			moved to 1107 Broadway, Suite 1625, NY, NY 10010	Valley			www.ccaco.com		
Danross Agency, Inc.	Insurance	21	4,000		temp. moved to 1 Park Ave., NY, NY; expects to return to 100 Church	Downtown	2,000				tel (212) 227-5900
Fuchsberg & Fuchsberg	Law	18	10,000		returned to 100 Church Street, NY, NY	Downtown	10,000				
George Malagon	N/A				moved to 189-02 6th Ave., Apt. 8G, Flushing, NY 11365	Queens				George Malagon at gmalagon@aol.com	
Gordan D. Miller	Law				temp. moved to 52 Duane Street, NY, NY 10007	Downtown					tel (212) 442-6817
Greenberg Trager Toplitz & Herbst	Law				temp. moved to 250 Park Ave., NY, NY 10177	Midtown					tel (212) 286-1240, fax (212) 944-7585
Lobel Chemical Corp.	Wholesale				relocated within NYC	New York					
Max Kade Foundation Inc.	Non-profit				relocated within NYC	New York				Frank_Gruenhagen@dfg.de	
Michael Palmieri	Law				moved to 1855 Victory Boulevard, Staten Island, NY 10314	Staten Island					
ML Life Insurance / Met Life?	Insurance	11			relocated to other NYC offices	New York			www.metlife.com?		
Mona Schussheim	Law	18, Suite 1800			moved to 10007 zip code	Downtown				Mona Schussheim at www.emotovich@corplaw.com	
Nelson, Mayoka & Co. / Visiclick Technologies	Technology	14	250	2	moved to 950 3rd Ave., 31st floor, NY, NY 10022 (1-year lease)	Midtown	250	2	www.visiclick.com	info@visiclick.com	tel (212) 692-7979, fax (631) 427-5149
New York City Department of Law	Government			1,525	returned to 100 Church Street, NY, NY	Downtown			www.law.nyc.gov/html/law		tel (212) 788-0303, fax (212) 788-0367
Panossian / Cards & Such	Retail				no new address given	N/A				Victor Panossian at spanossian@aol.com	
Traub & Traub PC	Law	16, Suite 1605			moved to 10007 zip code	Downtown				Jeffrey Traub at doritraub@aol.com	
Wendy S. Lazar	Law				moved to 270 Lafayette Street, Suite 400, NY, NY 10012	Valley				Wendy Lazar at wflsq@earthlink.net	tel (917) 596-3454
X-Com Technologies / Level 3 Communications	Communications		18,061		relocated to headquarters at 1025 Dorado Blvd., Broomfield, CO	Colorado			www.level3.com	investor.relations@level3.com	tel (212) 487-0100, (877) 585-8266, fax (720) 888-5085
Total Sq. Ft.			1,032,539								

22 Cortlandt Street

Tenant	Industry	Floor	Square Feet Leased	Employees	Status	Destination	New Square Footage	New Employment	Website	Email	Phone / Fax
Abbeville Press	Business Services	32	17,145		temp. moved to 116 West 23rd Street, Suite 500, NY, NY 10011; looking to move elsewhere in Manhattan	Manhattan			www.abbeville.com	abbeville@abbeville.com	tel (646) 375-2039, fax (646) 375-2040
Broadmark Capital Corporation	Investments	2			moved to 650 Fifth Ave., 3rd floor, NY, NY 10019	Midtown			www.broadmark.com	William Moreno at bmoreno@broadmark.com	tel (212) 918-0400
Capital IQ	Computer services	9	16,650	115	returned to 22 Cortlandt Street, NY, NY	Downtown	16,650	113/2 fired	www.capitaliq.com		tel (212) 791-9505, fax (212) 620-4315
Century 21	Retail	lower floors	150,000	1,000	returned to 22 Cortlandt Street, NY, NY (owns half of the building)	Downtown	150,000	1,000	www.c21stores.com		tel (212) 227-9092
Chubb Computer Services	Computer services				moved to 8 Sylvan Way, Parsippany, NJ 07054	New Jersey			www.chubbcs.com	Kim Trignano at kmatusek@chubbcs.com	tel 1-800-CHUBB-37
Chubb Institute	Computer services	15-17	50,376		moved to 498 7th Ave., 17th floor, NY, NY 10018	Midtown			www.chubbstitute.com		tel (212) 659-2116
Financial Technologies International FYI Image / QCSI Net	Computer services N/A	21-22 5	34,290	180	moved to 194 Wood Avenue South, 6th floor, Iselin, NJ 08830 moved to 99 John Street, NY, NY 10038	New Jersey Downtown		70	www.ftintl.com and www.ftisoft.com	Joe Christel at jchristel@ftisoft.com	tel (732) 491-1501, fax (732) 491-1991
Gaines Berland Inc. Capital / Ladenburg Capital Management	Investments	14 and 19-20	21,970		backfilled space at 2 existing offices: 590 Madison Ave., NY, NY 10022, and 1055 Stewart Ave., Bethpage, NY 11714	Midtown and Nassau			www.gbcapital.com and www.ladcap.com	info@ladcap.com and Alan Malamed at patg@ladcap.com	in Bethpage: tel (516) 470-1000 and 1-800-996-4246, fax (516) 470-1011
Han-Padron Associates LLP	Engineering	33	17,584	90	returned to 22 Cortlandt Street, NY, NY	Downtown	17,584	90	www.han-padron.com	Hector Bello at hbello@han-padron.com	tel (212) 260-9680, fax (212) 260-9681
Henrietta Waters	N/A				relocated within NYC	New York					
Interoute Telecom, Inc.	Communications	33	17,145		closed its NYC office; moved to its headquarters at Barnard's Inn, 86 Fetter Lane, London EC4A 1EN	England			www.interoute.com	info@interoute.com	in London: tel 44 20 7299 7000, fax 44 20 7580 1293
Municipal Credit Union	Finance	23-27 and 29	102,870		returned to 22 Cortlandt, NY, NY	Downtown	102,870	180	www.nymcu.com		tel (212) 693-4900
New York Mercantile Exchange / NYMEX	Finance	34 (trading floor at 1 North End Ave.)	85,770		temp. operating from 1 North End Ave., NY, NY 10282; expects to return to 22 Cortlandt, NY, NY	Downtown			www.nymex.com		tel (212) 299-2000
Odyssey RE	Insurance	18	17,145	30	returned to 22 Cortlandt Street, NY, NY	Downtown	17,145	30	www.odysseyre.com		Broadway: tel (212) 978-4700, fax (212) 432-0145; William St: tel (203) 977-8000, fax (203) 940-8601
Patrusky Mintz & Samel	Accounting	8	16,650		temp. operating from 720 Fifth Ave., NY, NY; expects to return to 22 Cortlandt Street, NY, NY	Downtown					
Summit Systems Inc.	Computer Services	30-31	34,290	200	returned to 22 Cortlandt Street, NY, NY	Downtown	34,290	200	www.summithq.com	internet_info@summithq.com	tel (212) 896-3400, fax (212) 896-3434
Swets Blackwell	Publishing	10	33,300		began to move out of 22 Cortlandt in Aug. 2001; moved to 105 Chambers Street, NY, NY 10007	Downtown		32	www.blackwell.com and www.swetsblackwell.com	info@us.swetsblackwell.com	tel (856) 312-2690, fax (856) 312-2000
United States Technologies	Computer services				moved to 1701 Pollitt Drive, Fair Lawn, NJ 07410	New Jersey			www.ustechnologies.com	info@ustechnologies.com	tel (201) 475-8700, fax (201) 475-8710
Waterdesign Associates	Design	28	17,145		moved to 18 E. 16th Street, NY, NY 10003	Valley			www.waterdesign.com		
Wheelhouse	Business Services	12	16,650		has not announced plans; may be reached at headquarters: 35 Corporate Drive, 3rd floor, Burlington, MA 01803	N/A			www.wheelhouse.com		in Burlington: tel (781) 505-3000, fax (781) 505-3001
Zurich Re	Insurance	29	17,145		moved to One Chase Manhattan Plaza, NY, NY 10005	Downtown			www.zurichre-na.com and www.converium.com		tel (212) 898-5000, fax (212) 898-5052
Total Sq. Ft.			668,110								

24-26 Cortlandt Street / 55
Church Street

Tenant	Industry	Floor	Square Feet Leased	Employees	Status	Destination	New Square Footage	New Employment	Website	Email	Phone / Fax
Millennium Hilton Hotel	Hospitality	ALL			temp. closed for 1+ years	Downtown			www.hilton.com		tel (212) 693-2001, fax (212) 571-2316
Total Sq. Ft.			380,052								

106 Liberty Street

Tenant	Industry	Floor	Square Feet Leased	Employees	Status	Destination	New Square Footage	New Employment	Website	Email	Phone / Fax
Liberty World Health and Wellness Center LLC	Personal Services				may be reached at PO Box 1699, NY, NY 10006	Downtown					
Total Sq. Ft.			18,000								

110 Liberty Street

Tenant	Industry	Floor	Square Feet Leased	Employees	Status	Destination	New Square Footage	New Employment	Website	Email	Phone / Fax
CSS	N/A				returned to 110 Liberty Street, NY, NY	Downtown					
Hiroko Suzuki	N/A				moved c/o Tabada Oxford, 42nd Street; can be reached at 208 W. 29th Street, Apt. 207, NY, NY 10001	Midtown					
12 apartments	N/A				unoccupied	N/A					
Total Sq. Ft.			6,000								

114 Liberty Street

Tenant	Industry	Floor	Square Feet Leased	Employees	Status	Destination	New Square Footage	New Employment	Website	Email	Phone / Fax
3 Fhreepranam Newsstand	Concessions				moved to 19 First Street, South River, NJ 08882	New Jersey				Nayam Contractor at cshilpi@hotmail.com	
Israel Goldstein	Health Care				moved to 468 Ocean Parkway, Brooklyn, NY 11218	Brooklyn					
Pizza World Inc	Concessions				moved to 10005 zip code	Downtown					
Total Optometric Eyecare PC	Health Care	3, Suite 301			returned to 114 Liberty Street, NY, NY	Downtown					
Universal Podiatry	Health Care				moved to 1088 East 22nd Street, NY, NY 10010	Valley					
Total Sq. Ft.			69,000								

1 Liberty Plaza

Tenant	Industry	Floor	Square Feet Leased	Employees	Status	Destination	New Square Footage	New Employment	Website	Email	Phone / Fax
Allen E Kaye, Law Offices	Law	23	3,000	4	moved to 111 Broadway, 13th floor, NY, NY 10006 (4.5 year lease)	Downtown	2,000	4	www.kayevalaw.com	allenekaye@compuserve.com	tel (212) 964-5858, fax (212) 608-3734
Allianz AG / Fireman's Fund	Insurance	20 (and WTC 2)	10,000		returned to 1 Liberty Plaza	Downtown	10,000		www.allianz.com		tel 1-800-843-3863
American Telecommunications	Business Services				moved to 10007 zip code	Downtown			www.americantelecommunications.com		
Baltimore Technologies Inc.	Technology				moved to 237 Park Ave., 21st floor, NY, NY 10017	Midtown			www.baltimoretechnologies.com and www.baltimore.com	info@baltimore.com	Jim Finnemore at tel (212) 551-1749, fax (212) 697-8486
Bank of Indonesia	Finance	31	10,250		returned to 1 Liberty Plaza, NY, NY; may be reached at headquarters: J. MH. Thamrin 2 Jakarta 10110 Indonesia	Downtown	10,250		www.bi.go.id	humasbi@bi.go.id	in Jakarta: 62 21 381 7187, fax 62 21 350 1867
Bank of Nova Scotia / Scotia Capital	Finance	22-26	210,000	300	returned to 1 Liberty Plaza, NY, NY	Downtown	260,000	330	www.scotiabank.com	Robert Wisniewski at robleewis@prodigy.net	Robert Wisniewski at tel (917) 821-1933
Boro Park Ultra Imaging PC	Health Care				moved to 4805 Fort Hamilton Parkway, Brooklyn, NY 11219	Brooklyn					
Bull & Bear Securities / Royal Bank of Canada	Investments	5			moved to 55 Broadway, NY, NY 10006	Downtown			www.royalbank.com		
Chicago Insurance Company / Interstate / Allianz	Insurance	20	10,000		temp. operating from 525 Washington Boulevard, Jersey City, NJ; plans to return to 1 Liberty Plaza in the second quarter of 2002	Downtown					
Citco Funds	Finance	51	34,000		moved to 350 Madison Ave., 12th floor, NY, NY 10017 (10-year lease)	Midtown	34,700	70	www.citco.com	newyorkfund@citco.com	tel (212) 401-9600, fax (212) 401-9661
Cleary Gottlieb Steen & Hamilton	Law	38-45	280,000	300	returned to 1 Liberty Plaza, NY, NY	Downtown		300	www.cgsh.com		tel (212) 255-2000, fax (212) 255-3999
Click2learn.com	Computer Services				moved to 400 Madison Ave., NY, NY 10017; may be reached at headquarters: 110 110th Ave. NE, Bellevue, WA 98004	Midtown			www.click2learn.com		in WA: tel (425) 462-0501, fax (425) 637-1504
Compaq Computer Corporation	Computer Services	27	31,500		relocated to existing offices at 2 Penn Plaza, NY, NY 10121	Valley			www.compaq.com		
Contextweb Inc.	Computer Services	23		8	moved to 160 Broadway, NY, NY 10038	Downtown	2,000	8	www.contextweb.com	Ananda Subramaniam at anand@contextweb.com	tel (212) 679-1412, fax (212) 349-2415
Digital Island	Business Services	23, Suite 2300			moved to 150 Fifth Ave., Suite 427, NY, NY 10011	Valley			www.digitalisland.com		tel (917) 305-3400, fax (917) 305-3440
Edwin B. Mishkin	Law				returned to 1 Liberty Plaza, NY, NY	Downtown					
Electronic Data Systems	Business Services				moved to 5400 Legacy Drive, Plano, TX 75024	Texas			www.eds.com		in TX: tel (972) 604-6000
Element Zero Entertainment	Personal Services	17			may be reached at PO Box 206, Canal Street Station, NY, NY 10013	Downtown			www.elementzero.com	element@elementzero.com	tel (212) 608-2670
Flemming Zulack & Williamson	Law	35	36,779	52	returned to 1 Liberty Plaza, NY, NY	Downtown	36,779		www.fzw.com	Dean at dnicyper@taconic.net and info@fzw.com	tel (212) 412-9500, fax (212) 964-9200
FolksAmerica Group	Insurance	19	42,000	128	returned to 1 Liberty Plaza, NY, NY	Downtown	42,000	130	www.folksamerica.com		tel (212) 312-2500
Forsythe & Lincoln Associates	Computer Services	23	40,000		has not announced plans	N/A					
Garry M Buff	Law				temp. moved to (917) area code	Westchester					tel (917) 837-4291
Generali USA	Insurance	29	22,818		returned to 1 Liberty Plaza, NY, NY	Downtown	22,818		www.generaliusa.com	Kim Forlino at info@generaliusa.com	
Genuity Solutions, Inc.	Computer Services	20	18,559		moved to existing offices at 100 Wall Street, 10th floor, NY, NY 10005, and Glenrock, NJ	Downtown and New Jersey		Wall Street: 30; Glenrock, NJ: 11	www.genuity.com		tel (646) 576-8400
Global Knowledge Network, Inc.	Business Services	27	20,000		moved to 1155 Ave. of the Americas, Room 1600, NY, NY 10036	Midtown			www.globalknowledge.com		tel (212) 944-1615
Goldman Sachs & Co.	Finance	7-13	259,964		moved to 85 Broad Street, NY, NY 10004 and will reoccupy 1 Liberty Plaza; will move to Jersey City, NJ in 2004	Downtown			www.gs.com		tel (212) 902-1000
Greig Fester North America Inc.	Insurance	31	10,250		has not announced plans	N/A					
Gruntal & Company	Finance	13-18	201,779	800	returned to 1 Liberty Plaza, NY, NY (may sublease as much as 180,000 sf)	Downtown	201,779	800	www.gruntal.com		tel (212) 820-8200, fax (212) 820-8800
HeadStrong / James Martin & Co.	Computer Services	1 and 51	31,478	25	moved to 220 West 42nd Street, NY, NY 10036	Midtown	9,000	25	www.headstrong.com	Tina Conley at sophia.cameron@headstrong.com	tel (703) 352-0900, fax (703) 352-7720
HQ Global Work Places	Business Services	23 (and 140 Broadway)	26,000		returned to 140 Broadway, NY, NY 10005	Downtown	23,967		www.hq.com and www.hqglobal.com		tel (212) 386-6100, fax (212) 386-6599

1 Liberty Plaza

Tenant	Industry	Floor	Square Feet Leased	Employees	Status	Destination	New Square Footage	New Employment	Website	Email	Phone / Fax
Hyperion Capital Markets	Finance	36	16,886	47	returned to 1 Liberty Plaza, NY, NY	Downtown	16,886		www.hyperioncapital.com		tel (212) 549-8400, fax (212) 549-8300
Ikon North America	Business Services				moved to 1 Penn Plaza, floors 53-54, NY, NY 10119	Valley			www.ikon.com		tel (212) 695-2460, fax (212) 695-0576
ILX Systems / Thompson Financial	Finance				moved to 111 Fulton Street, 6th floor, NY, NY 10038	Downtown			www.ilx.com	Bill Hosie at billh@ilx.com	
Insignia ESG	Real Estate	45	10,000		moved to 33 Whitehall, NY, NY 10004	Downtown	12,000-15,000		www.insigniaesg.com		tel (212) 618-7000, fax (212) 618-7085
Jason Solotaroff	Law				relocated within NYC	New York					
Kabira Technologies	Technology				moved to 33 Wood Ave. South, Iselin, NJ 08830	New Jersey			www.kabira.com		tel (732) 744-3389, fax (732) 744-3395
Long Term Credit Bank of Japan Ltd. / Shinsei Bank	Finance	47-50	148,000		in the process of moving to 399 Park Ave., NY, NY 10022, on 9/11	Midtown			www.shinseibank.co.jp		tel 81-3-5954-7530
Maria Fiorini Ramirez	Business Services	46	10,250		returned to 1 Liberty Plaza, NY, NY	Downtown	10,250		www.mfr.com		tel (212) 416-5000, fax (212) 385-1860
Mark A. Walker	Law				relocated within NYC	New York					
Mclaren Solutions / ITK Solutions	Business Services	23	300	4	moved to 230 Park Ave., Suite 1021, NY, NY 10169	Midtown	500	7	www.mclarensolutions.com and www.itksolutions.com	Jonathan Rochelle at jr@mclarensolutions.com	Susan Kirchoff at tel (212) 385-4040
Mocatta Metals Corp.	Wholesale	25	25,000		has not announced plans	N/A					
Mutual of America	Insurance	47	3,500	10	returned to 1 Liberty Plaza, NY, NY	Downtown	3,500	10	www.mutualofamerica.com		tel (212) 587-9045, fax (212) 587-9036
Nasdaq Stock Market	Finance	47-50	160,927	130	Nasdaq moved to 1500 Broadway, NY, NY 10036 at Times Square (22-year lease); parent company NASD returned to 1 Liberty Plaza	Midtown and Downtown	Broadway: 53,000		www.nasdaq.com		
New Japan Securities / Shinko Securities Company / Mizuho Group	Finance	23	16,986		temp. operating from New Jersey	New Jersey			www.shinko-sec.co.jp	info@shinko-sec.co.jp	
Ogaki Kyoritsu Bank	Finance	47	18,487		returned to 1 Liberty Plaza	Downtown	18,487		www.okb.co.jp		
People Ventures Inc.	Business Services	23			moved to 10006 zip code; can be reached at 3819 Creekside Lane, Holmen, WI 54636	Downtown			www.peopleventures.com		in WI: tel (608) 782-9693
Prudential Securities Inc.	Finance	46	32,667		returned to 1 Liberty Plaza, but may consolidate in space at 1 New York Plaza, NY, NY	Downtown	1 New York Plaza: 1,200,000		www.prudential.com and www.prufn.com	Joseph Kehoe at joseph_kehoe@prusec.com	tel (212) 406-3380, fax (212) 978-1013
Reserve Bank of Australia	Finance	46	4,647	10	returned to 1 Liberty Plaza, NY, NY	Downtown	4,647	10	www.rba.gov.au	rbainfo@rba.gov.au	tel (212) 566-8466, fax (212) 566-8501
Richard A. Susko	Law				relocated within NYC	New York					
Royal Bank of Canada	Finance		164,204		leased space at 287 Bowman Ave. in Purchase, NY 10577 (6 year-lease with an option for another 25,000 sf) and at River View in Harrison, NJ 07029; will return to 1 Liberty Plaza, NY, NY	Westchester, New Jersey and Downtown	Purchase, NY: 40,000; Harrison, NJ: 55,000	Harrison, NJ: 200	www.rbc.com		
Schindler Cohen & Hochman LLP	Law			9	temp. moved to 45 Rockefeller Plaza, NY, NY 10111	Midtown		12			tel (212) 841-8870, fax (212) 841-8868
Scotia Mocatta / Scotia Capital	Finance	25	25,000		returned to 1 Liberty Plaza, NY, NY	Downtown	25,000		www.mocatta.com		tel (212) 912-8500, fax (212) 912-8648
Sodexho Management Co.	Business Services				moved to 10006 zip code	Downtown			www.sodexho.co.uk		
Stamell & Schager LLP	Law	35			moved to 118 E 78th Street, NY, NY 10021	Upper East Side			www.ssnyc.com	Susan Frank at stamell@ssnyc.com	tel (212) 794-8771
Swiss RE America Corp. Services	Insurance	52	24,722		returned to 1 Liberty Plaza, NY, NY	Downtown	24,722		www.swissre.com	Michael D. McNamara	
Tokyo Re Corp. / Tokyo Marine and Fire Insurance Company Ltd.	Insurance	1	13,915		has not announced plans	N/A			www.tokiomarine.co.jp		
T. Rowe Price Associates	Investments				relocated within NYC; may be contacted at PO Box 17630, Baltimore, MD 21297	New York			www.troweprice.com	info@troweprice.com	tel 1-800-225-5132
Tudor Investment Corporation	Investments	51	10,500		moved to 1275 King St., Greenwich, CT 06831	Connecticut					James Hurst at tel (203) 863-6700
Tudor Software LLC	Computer Services	52			relocated within NYC	New York					
Turner & Owen, Law Offices	Law	20	10,000		returned to 1 Liberty Plaza, NY, NY	Downtown	10,000				
Walter S. Rothschild	Law				returned to 1 Liberty Plaza, NY, NY	Downtown					

1 Liberty Plaza

Tenant	Industry	Floor	Square Feet Leased	Employees	Status	Destination	New Square Footage	New Employment	Website	Email	Phone / Fax
Zurich American Insurance Group / Zurich North America	Insurance	21, 28, and 53	215,000	600	relocated employees to existing space in Hauppauge, NY and leased temporary space at 1 Upper Pond Road, Parsippany, NJ, 105 E. 17th Street, NY, and 601 W. 26th Street; expects to return to 1 Liberty Plaza, NY, NY in the second quarter of 2002	Valley, New Jersey and Downtown	26th St: 135,000; 17th St.: 75,000; Parsippany, NJ: 9,000; 1 Liberty Plaza: 215,000	26th St: 230; 17th St: 250; Parsippany, NJ: 110	www.zurichna.com		
Total Sq. Ft.			2,124,447								

130 Liberty Plaza

Tenant	Industry	Floor	Square Feet Leased	Employees	Status	Destination	New Square Footage	New Employment	Website	Email	Phone / Fax
Argent Executive Polish Inc.	Business Services				moved to 1 New York Plaza, Concourse level, NY, NY	Downtown					
Charles Maltz	Health Care				moved to 550 First Ave., NY, NY 10016	Midtown					tel (212) 415-4768, fax (212) 415-4728
Deutsche Bank	Finance	upper floors (also in 4 WTC)	1,200,000		relocated to headquarters at 31 W. 52nd Street, as well as 280 Park Ave., 885 Third Ave., 1501 Broadway, 55 Broad, 14 and 16 Wall, 126 East 56th, 1251, 1290 and 1301 Ave. of the Americas, NY, NY; bought 60 Wall Street	Midtown and Downtown	60 Wall St.: 1,640,000		www.bankerstrust.com , www.deutschebank.com and www.db.com		tel (212) 469-8000
Key Punch Computer Temporaries Inc.	Business Services	Level A	4,000		moved to 936 Broadway, NY, NY 10010	Valley	ca. 4,000				tel (212) 979-1400
Plaza Chateau Men's Hair Shop	Personal Services				moved to 10006 zip code	Downtown					
Total Sq. Ft.			1,415,086								

75 Park Place

Tenant	Industry	Floor	Square Feet Leased	Employees	Status	Destination	New Square Footage	New Employment	Website	Email	Phone / Fax
Bank of New York	Finance		75,352 (also in 101 Barclay and 100 Church)		leased temp. space in 17 NYC locations incl. 63 Madison Ave., 620 Ave. of the Americas, 1290 Ave. of the Americas, 5 Penn Plaza, 330 West 34th St, and 111 8th Ave., as well as 15 Broad St. (15-month lease); may be reached at headquarters: One Wall Street, NY, NY 10286; expects to return to 101 Barclay and 75 Park Place when repaired	Downtown	17 locations: 800,000 incl. 63 Madison: 113,572, and 620 Ave. of the Americas: 74,425; Broad Street: 800,000		www.bankofnewyork.com and www.bankofny.com		headquarters: tel (212) 495-1784
Eleanor Naylor Dana Charitable Trust	Non-profit		75,000		returned to 75 Park Place, NY, NY	Downtown	75,000				tel (212) 754-2890
Maxwell Medical Imaging	Health Care				moved to 11 East 36th Street, 7th floor, NY, NY 10016	Midtown					
Multex.com	Investments	4	15,235	40	returned to 75 Park Place, NY, NY	Downtown	15,235	40	www.multex.com	multex@multex.com	tel 1-800-721-2225 and (212) 607-2500, fax (212) 607-2510
New York City Office of Information Technology and Telecommunications	Government				returned to 75 Park Place, NY, NY, and moved to 11 MetroTech Center, Brooklyn, NY 11201, and 59 Maiden Lane, NY, NY 10038	Downtown and Brooklyn			www.nyc.gov		
New York City Office of Management and Budget	Government	8	290,000		returned to 75 Park Place, NY, NY	Downtown			www.nyc.gov		
Nweke Wilson	Computer Services	4			moved to 53 Wall Street, NY, NY 10005	Downtown	1,000			Nweke Wilson at wilsonn@earthlink.net	tel (917) 576-6362
R.R. Donnelly & Sons, Inc.	Publishing	2-3 and Basement	86,978		returned to 75 Park Place, NY, NY	Downtown	86,978		www.rrdonnelly.com and www.rrd.com	info@rrd.com	in Chicago: tel (312) 326-8000
StreamingEdge.com Inc.	Finance	4			returned to 75 Park Place, NY, NY	Downtown			www.streamingedge.com	info@streamingedge.com	tel (212) 791-6026, fax (212) 791-6684
Superhot Messenger Service	Business Services				relocated within NYC	New York					
Tradition Asiel Securities	Finance	4	47,260	325	returned to 75 Park Place, NY, NY	Downtown	47,260	325	www.asiel-llc.com and www.tradition-asiel.com	webmaster@tradition-asiel.com	tel (212) 791-4500
Total Sq. Ft.			547,165								

90 West Street

Tenant	Industry	Floor	Square Feet Leased	Employees	Status	Destination	New Square Footage	New Employment	Website	Email	Phone / Fax
American Pacific Futures	Finance	21, Suite 2108			temp. moved to 65 Broadway, NY, NY 10006	Downtown	2,000				
AMR Shipping / American Airlines?	Transportation				moved to 420 Fifth Ave., 18th floor, NY, NY 10018	Midtown			www.amrcorp.com?		
Angelo Mariani	Law	21, Suite 2105			returned to 90 West Street, NY, NY	Downtown					
Broadway Trading	Investments				moved to 50 Broad Street, 2nd floor, NY, NY 10004	Downtown			www.broadwaytrading.com		tel (212) 328-3555, fax (212) 377-1562
Business Edge Solutions	Business Services				moved to 1633 Broadway, 23rd floor, NY, NY 10019	Midtown			www.businessedge.com	officenyc@businessedge.com	tel (646) 756-2520, fax (646) 756-2605
Chapman Works LLC	N/A	21, Suite 2100			moved c/o David Sinclair, 111 West 28th Street, Apt. 3A, NY, NY 10001	Valley			www.chapmanworks.com	Lisa Chapman at lchapman@chapmanworks.com	
David Gibson	N/A	23			relocated within NYC	New York				David Gibson at dbq711@aol.com	
Edwards & Kelcey Engineers Inc.	Engineering		16,000	35	moved to 1501 Broadway, Suites 606 and 609, NY, NY 10036	Midtown	15,918	35	www.ekcorp.com		tel (212) 944-2000, fax (212) 302-4645
Faith Exchange Fellowship	Non-profit	18		6	moved to 30 Wall Street, 6th floor, NY, NY 10005	Downtown		6	www.faithechange.org	Jim Gigliano at jim@fef.org	tel (212) 566-4085
Garvan Interactive / Vanguard Direct	Computer Services		13,433		moved to 519 8th Ave., 23rd floor, NY, NY 10018	Midtown	13,000		www.garvaninteractive.com and www.vanguarddirect.com		tel (212) 279-2300, fax (212) 736-8305
Gruzen Samton	Architecture	3-4	24,000	120	moved to 320 W. 13th Street, NY, NY 10014	Valley	21,000	120	www.gruzensamton.com	Anne Marie Edden at aedden@gruzensamton.com	tel (212) 477-0900, fax (212) 477-1257
H & H Building	Construction				moved to 51 Hudson Street, NY, NY 10013	Downtown					
Hanover Capital Mortgage Holding Inc.	Finance	22, Suite 2210		20	moved to the Woolworth Building and its headquarters at 100 Metroplex Drive, Suite 301, Edison, NJ 08817	Downtown and New Jersey		Woolworth Building: 8	www.hanovercapital.com	Kim DeLeon at kim.deleon@hanovercapital.com	Kim at tel (646) 227-9208
Hansen Shipping Agency	Transportation				returned to 90 West Street, NY, NY	Downtown					
Helen Keller Worldwide	Non-profit		14,000		moved to 325 Park Avenue South, Suite 1200, NY, NY 10010	Valley	12,000		www.hki.org	Viresh Desai at desaihome@aol.com	tel (212) 532-0544
Hill, Rivkins and Hayden LLP	Law				moved to 5 Hanover Square, NY, NY 10004	Downtown					
Ikon Office Solution	Business Services		15,118		moved to 233 Spring Street, NY, NY 10012	Valley			www.ikon.com		
International Cargo Gear Bureau Inc. / National Cargo Bureau	Construction	15, Suite 1500		7	moved to 120 West 44th Street, Suite 401, NY, NY 10036	Midtown		7	www.icgb.com	incargear@aol.com	tel (917) 510-9938, fax (917) 510-9974
John Robert Powers	Personal Services	16, Suite 1612			temp. moved to 200 Connecticut Avenue, Suite 6C, Norwalk, CT 06854	Connecticut			www.jrpowers.net	connecticut@jrpowers.net	tel (203) 853-0080, fax (203) 853-2434
Kepmen Capital Broker	Investments		2,500	11	moved to 900 Third Ave., 10th floor, NY, NY 10022	Midtown	2,500	11	www.kepmencapital.com		tel (212) 888-2411, fax (212) 888-2603
Langan Engineering and Environmental Services	Engineering			1 lost	temp. moved to River Drive Center 1, Elmwood Park, NJ 07407; will move to 21 Penn Plaza, NY, NY in summer 2002	Valley	Penn Plaza: 10,000		www.langan.com		tel (201) 794-6900, fax (201) 794-7501
Lynch	N/A				moved to 10006 zip code	Downtown				Robert Clyne at clynes@netzero.net	
Meyers & Meyers	Law				moved to 5 Hannover Square, NY, NY 10004	Downtown					tel (212) 509-2500, fax (212) 509-2424
New York Initiative Inc.	Non-profit	18, Suite 1820			no new address given	N/A					
Nextech Consulting Inc.	Consulting				moved to 535 Fifth Ave., 29th floor, NY, NY 10017	Midtown				Michael Avari at mavari@graceone.com	
On Point Management	Business Services				moved to 10006 zip code	Downtown					
Paragon Computer Professionals	Computer Services		3,400	10	moved to 1 Penn Plaza, Suite 1538, NY, NY 10119	Valley	3,400	10	www.paracomp.com		tel 1-800-462-5582
Piatigorsky Foundation	Non-profit				moved to 225 West 34th Street, Suite 1703, NY, NY	Valley			www.piatigorskyfoundation.org	info@piatigorskyfoundation.org	Kim Fraitas at tel (212) 971-5309, fax (212) 732-2928
Plus One Fitness	Personal Services				moved to 322 8th Ave., 6th floor, NY, NY 10001	Valley			www.plusone.com	Bill Motta at minotta@plusone.com	tel (212) 886-0950, fax (212) 886-0982
Polakoff & Michaelson, CPA	Accounting		5,500		returned to 90 West Street, NY, NY	Downtown			www.pandmcpa.com		Craig Michaelson at tel (212) 843-8130
Rosner Nocera & Ragone, LLP	Law	13, Suite 1304			moved to 40 Wall Street, 24th floor, NY, NY 10005	Downtown				Peter Ragone at rosnerlaw@aol.com	tel (212) 635-2244, fax (212) 635-0533
Summit	N/A	10, Suite 1000			moved c/o Kirlin, Campbell and Keating, 5 Hanover Square, NY, NY 10004	Downtown				Robert Clyne at clynes@netzero.net	

90 West Street

Tenant	Industry	Floor	Square Feet Leased	Employees	Status	Destination	New Square Footage	New Employment	Website	Email	Phone / Fax
Thad Hayes Inc.	Design	7			returned to 90 West Street, NY, NY	Downtown			www.thadhayes.com	info@thadhayes.com	tel (212) 571-1234, fax (212) 571-1239
Two - Twelve Associates	Business Services	23	5,000	30	moved to 902 Broadway, 20th floor, NY, NY 10010	Valley	5,000	30	www.twotwelve.com	Shafqat Tanweer at stanweer@twotwelve.com	tel (212) 254-6670
Westfalia Investments Inc.	Finance		2,800	11	moved to 546 Fifth Ave., NY, NY 10036	Midtown	2,800	11	www.westfaliainvestments.com	Rafael Dominguez at rafaeldom@hotmail.com	Peter Cardilo at tel (212) 391-7810
Wolf Maryles and Associates LLP	Law				moved to 10006 zip code	Downtown			www.wolfmaryles.com		
Total Sq. Ft.			350,000								

140 West Street

Tenant	Industry	Floor	Square Feet Leased	Employees	Status	Destination	New Square Footage	New Employment	Website	Email	Phone / Fax
Eighth Avenue Gourmet Market	Concessions	GND			relocated within NYC	New York					
New York Outward Bound	Non-profit				moved to 29-46 Northern Blvd., Long Island City, NY 11101	Queens			www.nycoutwardbound.org	info@nycoutwardbound.org	tel (718) 706-9900, fax (718) 433-0500
Telecom Management Consulting Group LLC	Consulting			40	moved to 708 3rd Ave., 26th floor, NY, NY 10017	Midtown		5	www.telecommcg.com	info@telecommcg.com	tel (212) 557-2455, fax (212) 557-3520
Verizon Communications	Communications	(and 2 WTC)	1,160,000	1,700	moved to existing locations; will return to 140 West St.	Midtown and Downtown	1,160,000	1,700	www.verizon.com		
Total Sq. Ft.			1,171,540								

30 West Broadway

Tenant	Industry	Floor	Square Feet Leased	Employees	Status	Destination	New Square Footage	New Employment	Website	Email	Phone / Fax
3 Legged Dog Inc.	N/A	14			moved to 514 W. 24th Street, Suite 2E, NY, NY 10011	Valley					
DuoCash	Personal Services		2,000	3	moved to 373 Fifth Avenue, 5th floor, NY, NY 10016	Midtown	2,300	3	www.duocash.com	Victor Nape at victor@duocash.com and info@duocash.com	tel (212) 725-6725
Hip n' Tasty	Personal Services	14, Suite 1411			moved to 55 Broad Street, 16th floor, NY, NY 10004	Downtown			www.hiptasty.com	Amy Schulman at amy@hiptasty.com	tel (646) 498-7055, fax (212) 248-2801
Imbot.com Inc.	Personal Services				moved to 230 Fifth Avenue, 20th floor, NY, NY 10001	Valley			www.imbot.com	George Curtis at georgecurtis@imbot.com	tel (212) 689-2640
Lateral Eye / Telemedia Accelerator	Computer Services	14			moved to 55 Broad Street, 16th floor, NY, NY 10004	Downtown			www.lateraleye.com and www.telemediaaccelerator.com	Venu Pillai at vpilla@lateraleye.com and info@lateraleye.com	tel (212) 798-3300, fax (716) 834-3180
Research Foundation, CUNY	Education		370,000	131	temp. relocated to existing facilities at 555 West 57th Street, 11th Floor, NY, NY 10019; intends to return to 30 W. Broadway (owns building)	Downtown	370,000	131	www.rfcuny.org	rfcuny@aol.com	tel (212) 417-6300, fax (212) 417-8519
Sherpa Corporation / Mater	Computer Services				moved to 55 Broad Street, 16th floor, NY, NY 10004	Downtown			www.thesherpa.com	Ed Condon at edcondon@thesherpa.com	tel (212) 612-1268, fax (212) 248-2801
Total Sq. Ft.			381,000								

Appendix 1B

Sources for the 2002 Traffic Count Database

The primary data sources compiled by NYMTC for the 2002 BPM screenline database update were as follows:

1. 1999-2002 NYCDOT Bridge Traffic Volumes Report
2. 1999-2002 NYSDOT TF3
3. 2002 New York City Screenline Traffic Flow from NYCDOT
4. 2002 Port Authority New York and New Jersey (PANY&NJ) Database
5. 2002 NYMTC Hub-Bound Travel Report
6. 2002 New York State Thruway Authority (NYSTA) Database
7. 2000-2002 Westchester Department of Public Work ATR Count
8. 2001-2003 NYCDOT ATR Count
9. 1998-2002 Nassau and Suffolk County Routes ATR Count
10. 2002 Dutchess County HPMS Section ATR Count
11. 1999, 2001 and 2002 Rockland County ATR Count
12. 2002 NYSDOT Traffic Volume Report
13. 2002 New York State Bridge Authority (NYSBA) Database

Appendix 1.C Transit Data Collection Sources

Data Source	Contact Person	Data Requested
MTA, 347 Madison Ave New York, NY 10017	Cristopher Jandoli, e-mail: cjandoli@mtahq.org Tel: 212-878-4605 Or David Keller, Dkeller@mtahq.org , Tel: 212-878-7428	Ridership on NYC Subway, NYC Transit Buses, LIRR, MetroNorth Railroad, Long Island Buses
New York Transit 370 Jay Street, Brooklyn, NY 11201	Jim Barry, e-mail: JaBarry2@nyct.com Tel: 718-694-3355, e-mail: JaBarry@nyct.com	Data on the NYC Subway
MTA MetroNorth Railroad 347 Madison Ave 12 Floor, New York, NY 10017	Pres. Peter Cannito, tel: 212-672-1290 Fax: 212-340-4995 (Eve)	Data on MTA MNRR
MTA-Long Island Rail Road 90-27 Sutphin Blvd. - 0535 Jamaica, NY 11435	Mr. Frank Olsen-Tank Tel: 718-330-4321, Fax: 718-596-2146 www.mta.nyc.ny.us/lirr/index/html or David Summer, tel: 718-558-8055	Data on LIRR
NYC DOT, Passenger Transport 59 Maiden Ln, 35 th Fl, New York NY 10038	Bill Hough, e-mail: bhough@dot.nyc.gov Tel: 212-487-8327	Data on NYC Buses (public & private buses)
Long Island Bus 700 Commercial Ave, Garden City, NY 11539	Neil Yellin, President, Tel: 516-542-0100x4525 Fax 516-228-6558, e-mail: nyellin@libus.org	Data on LI buses
Suffolk County Department of Public Work, Transp. Division	Robert Shinnick, Tel: 631-852-4874 e-mail: Robert.Shinnick@co.suffolk.ny.us	Data on Suffolk County buses
Westchester County DOT 100 East First Street, 9 th Floor Mt. Vernon, NY 10550	Patty Chemka, tel: 914-813-7756 psc1@westchestergov.com	Data on BeeLine buses
PANY&NJ, PATH One Path Plaza, Jersey City, NJ 07306	Ed Sasportas Tel: 201-216-6198, fax: 201-216-6776, email: esasport@panynj.gov	Data on PATH ridership
NYC DOT, Staten Island Ferry One Bay Street, Staten Island	Bill Hough, e-mail: mtohl@dot.nyc.gov Tel: 718-876-5255, fax: 718-876-6644	Data on Staten Island Ferry
Port Authority of New York & New Jersey, Newark Legal Center One Riverfront Plaza, 9 th Fl, Newark, NJ 07102	Amit Bhowmick, e-mail: abhowmick@panynj.gov Tel: 973-565-5516	Data on Private Ferries Within NY, or to New Jersey (various points)

Appendix 2A

NEW YORK URBAN REGION EMPLOYMENT BY COUNTY, 1970-2030 (in 000s)

AREANAME	1970	1980	1990	2000	2002	2005	2010	2015	2020	2025	2030
NEW YORK CITY	4,083.7	3,626.6	3,966.1	4,277.3	4145.2	4,177.1	4,460.4	4,650.7	4,849.6	5,032.5	5,243.1
Bronx	247.3	211.9	237.8	269.4	274.3	282.0	295.5	307.1	320.2	333.5	347.7
Kings	592.2	485.7	504.5	584.6	588.2	590.5	621.6	650.0	681.8	713.5	746.8
New York	2,654.9	2,364.8	2,565.1	2,682.2	2,548.8	2,545.8	2,737.7	2,850.1	2,966.7	3,067.5	3,189.4
Queens	543.1	499.7	567.3	624.1	617.5	635.4	668.3	693.3	718.5	743.1	771.3
Richmond	45.9	64.4	91.6	116.9	116.3	123.4	137.4	150.1	162.5	174.9	188.0
LONG ISLAND	868.9	1,099.3	1,329.8	1,457.5	1,464.1	1,488.8	1,565.7	1,640.5	1,705.9	1,757.5	1,812.2
Nassau	562.9	643.3	716.8	743.3	742.6	742.7	767.3	790.2	807.6	817.4	828.8
Suffolk	306.1	456.0	613.0	714.2	721.5	746.0	798.4	850.3	898.3	940.1	983.4
MID HUDSON	696.8	830.1	1,009.2	1,079.6	1,094.2	1,123.8	1,170.9	1,222.7	1,279.7	1,342.9	1,411.5
Dutchess	92.5	110.6	140.4	139.4	142.1	145.8	154.8	164.1	174.4	185.9	198.2
Orange	80.7	95.9	128.3	149.8	152.2	160.4	171.4	182.8	194.5	206.6	219.2
Putnam	11.8	17.1	26.3	32.9	34.0	36.5	38.3	40.2	42.6	45.1	47.8
Rockland	73.6	98.7	122.7	133.7	137.7	142.0	148.7	153.8	160.9	168.4	176.1
Sullivan	23.0	27.0	31.8	33.1	33.8	34.8	36.3	37.8	39.8	42.0	44.4
Ulster	49.1	58.6	76.2	81.6	81.7	86.1	88.5	92.4	96.6	101.2	106.5
Westchester	366.2	422.1	483.6	509.2	512.7	518.1	532.9	551.5	571.0	593.7	619.3
NEW JERSEY	2,458.8	2,837.9	3,403.9	3,748.3	3766.5	3,882.0	4,079.5	4,278.9	4,514.1	4,741.1	4,985.7
Bergen	372.2	456.2	533.8	570.2	566.9	581.3	593.1	610.6	631.5	650.9	673.0
Essex	453.9	428.9	436.2	451.1	447.1	442.3	456.6	468.3	483.8	499.8	518.5
Hudson	279.8	248.6	273.5	287.6	289.4	286.6	300.4	313.8	329.5	344.2	359.7
Hunterdon	24.1	32.5	51.4	68.8	71.7	75.3	83.4	91.6	99.6	107.7	116.2
Mercer	148.0	176.8	223.6	244.3	252.8	260.0	271.5	281.4	296.8	310.7	324.7
Middlesex	236.0	313.2	407.5	474.4	474.2	503.0	528.1	553.6	583.6	613.0	644.4
Monmouth	141.9	195.7	265.5	306.6	315.1	332.4	357.8	383.3	412.3	440.6	470.0
Morris	125.5	212.7	288.4	342.6	344.2	367.0	392.0	414.0	438.9	462.0	487.9
Ocean	54.3	96.9	146.1	179.4	189.4	199.7	216.4	233.9	252.7	271.6	291.2
Passaic	203.9	209.4	225.0	218.8	213.6	217.7	220.0	222.6	227.2	231.6	237.8
Somerset	69.0	109.3	166.1	217.7	213.4	233.2	262.7	296.0	330.1	363.9	398.1
Sussex	20.4	30.1	42.0	53.1	54.9	58.8	63.6	68.8	74.0	79.6	85.4
Union	300.2	292.6	303.0	289.2	287.9	278.2	284.2	288.6	298.8	307.4	317.6
Warren	29.6	34.9	41.9	44.3	45.9	46.6	49.7	52.4	55.2	58.0	61.1
CONNECTICUT	731.5	874.0	1,028.0	1,064.9	1056.2	1,072.2	1,135.3	1,174.4	1,207.8	1,239.0	1,275.0
Fairfield	347.6	436.9	509.6	536.9	530.1	534.8	568.3	587.9	603.7	618.1	635.4
Litchfield	51.7	67.7	83.0	89.5	89.7	93.6	100.2	105.5	110.5	115.4	120.4
New Haven	332.2	369.4	435.4	438.6	436.5	443.8	466.8	481.0	493.7	505.6	519.2
REGION	8,839.7	9,268.0	10,737.0	11,627.7	11,526.2	11,743.9	12,411.8	12,967.1	13,557.1	14,113.0	14,727.4

Source: New York Metropolitan Transportation Council, September 2004

Note: 2002 estimates from U.S. Bureau of the Census, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis

Appendix 2B

NEW YORK URBAN REGION POPULATION BY COUNTY, 1970-2030 (in 000s)

AREANAME	1970	1980	1990	2000	2002	2005	2010	2015	2020	2025	2030
NEW YORK CITY	7,894.9	7,071.6	7,322.6	8,008.3	8,072.0	8,209.3	8,411.7	8,674.1	9,013.5	9,352.5	9,492.4
Bronx	1,471.7	1,169.0	1,203.8	1,332.7	1,358.4	1,367.5	1,391.1	1,432.1	1,484.9	1,546.8	1,557.4
Kings	2,602.0	2,231.0	2,300.7	2,465.3	2,475.7	2,515.3	2,565.9	2,622.3	2,688.1	2,764.3	2,797.5
New York	1,539.2	1,428.3	1,487.5	1,537.2	1,555.4	1,583.0	1,625.8	1,650.9	1,675.8	1,694.2	1,709.2
Queens	1,986.5	1,891.3	1,951.6	2,229.4	2,227.2	2,272.7	2,334.3	2,445.2	2,610.8	2,756.3	2,795.4
Richmond	295.5	352.0	379.0	443.7	455.4	470.9	494.7	523.7	554.0	591.0	633.0
LONG ISLAND	2,553.0	2,605.8	2,609.2	2,753.9	2,795.0	2,837.2	2,923.1	2,999.6	3,070.3	3,160.7	3,219.8
Nassau	1,428.1	1,321.6	1,287.4	1,334.5	1,339.3	1,357.4	1,377.7	1,394.5	1,409.9	1,423.9	1,436.5
Suffolk	1,124.9	1,284.2	1,321.8	1,419.4	1,455.7	1,479.8	1,545.4	1,605.2	1,660.4	1,736.8	1,783.4
MID HUDSON	1,818.5	1,931.3	2,026.0	2,179.2	2,225.3	2,312.8	2,422.4	2,500.9	2,607.2	2,719.9	2,871.6
Dutchess	222.3	245.1	259.5	280.2	287.7	300.1	328.0	342.9	362.9	383.1	431.5
Orange	221.7	259.6	307.6	341.4	355.8	375.6	408.9	434.1	467.0	499.2	532.4
Putnam	56.7	77.2	83.9	95.7	98.5	101.9	110.0	114.6	120.3	126.1	134.3
Rockland	229.9	259.5	265.5	286.8	291.2	298.9	315.7	328.4	342.5	357.6	370.5
Sullivan	52.6	65.1	69.3	74.0	74.1	79.1	90.3	96.2	102.3	108.4	125.3
Ulster	141.2	158.2	165.3	177.7	180.1	188.8	195.2	208.4	226.2	243.3	265.7
Westchester	894.1	866.6	874.9	923.5	937.9	968.2	974.2	976.2	985.8	1,002.2	1,011.9
NEW JERSEY	5,799.7	5,857.0	6,097.1	6,661.8	6,790.2	6,927.0	7,095.9	7,271.5	7,470.5	7,874.9	8,202.0
Bergen	898.0	845.4	825.4	884.1	894.5	905.4	907.4	917.0	931.8	963.1	989.6
Essex	930.0	851.3	778.0	793.6	795.9	809.8	818.0	826.0	841.8	875.0	893.6
Hudson	609.3	557.0	553.1	609.0	609.9	622.1	648.6	670.6	688.6	713.5	743.6
Hunterdon	69.7	87.4	107.9	122.0	126.7	130.0	136.1	139.3	143.5	154.6	165.1
Mercer	304.0	307.9	325.8	350.8	358.2	366.5	388.4	400.8	410.1	443.1	482.7
Middlesex	583.8	595.9	671.7	750.2	772.4	785.6	813.5	842.6	869.7	913.6	956.9
Monmouth	459.3	503.2	553.2	615.3	627.7	652.0	665.0	683.5	698.8	723.8	732.2
Morris	383.4	407.6	421.3	470.2	478.6	494.8	500.4	504.9	514.1	536.5	557.2
Ocean	208.5	346.0	433.2	510.9	536.8	552.9	574.1	600.2	628.4	689.9	737.3
Passaic	460.8	447.6	470.9	489.0	496.5	498.8	503.8	511.1	523.4	548.4	558.7
Somerset	198.4	203.1	240.2	297.5	307.7	314.9	330.4	344.5	359.9	392.7	425.9
Sussex	77.5	116.1	130.9	144.2	148.9	152.0	156.1	160.9	168.2	185.5	198.5
Union	543.1	504.1	493.8	522.5	528.9	530.8	538.8	550.0	565.3	593.7	607.7
Warren	73.9	84.4	91.7	102.4	107.5	111.4	115.4	120.2	126.9	141.6	152.8
CONNECTICUT	1,681.9	1,725.2	1,806.0	1,888.8	1,916.7	1,958.4	2,016.5	2,078.3	2,136.0	2,206.8	2,291.6
Fairfield	792.8	807.1	827.7	882.6	894.6	916.1	945.7	975.3	999.3	1,030.0	1,067.2
Litchfield	144.1	156.8	174.1	182.2	186.4	191.9	206.9	217.0	230.7	244.2	254.6
New Haven	745.0	761.3	804.2	824.0	835.7	850.4	863.9	886.0	906.0	932.5	969.7
REGION	19,748.0	19,191.0	19,860.8	21,491.9	21,799.2	22,244.7	22,869.6	23,524.5	24,297.5	25,314.8	26,077.3

Source: New York Metropolitan Transportation Council, September 2004

Note: 2002 estimates from U.S. Bureau of the Census, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis

Appendix 2C Future Development Inventory

NYMTC REGION PROJECT SUMMARIES

Estimated Completion Year	2005	2006	2008	2008-2010	2010-2015	2015-2030
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Bronx

residential units	0	379	1,055	1,018	0	0
commercial sq ft	0	230,100	234,500	1,415,490	0	0

Kings

residential units	9,051	2,738	2,448	3,619	9,135	0
commercial sq ft	4,738,210	1,779,500	1,191,000	1,270,000	5,243,500	0

Nassau

residential units	1,102	1,198	1,683	0	324	170
commercial sq ft	1,068,840	368,500	535,000	0	0	636,000

New York

residential units	1,240	6,332	5,803	1,128	5,040	470
commercial sq ft	2,203,500	2,684,615	2,987,972	2,000,000	5,114,037	0

Putnam

residential units	0	0	0	0	0	0
commercial sq ft	371,500	0	0	0	0	0

Appendix 2C Future Development Inventory

NYMTC REGION PROJECT SUMMARIES

Estimated Completion Year	2005	2006	2008	2008-2010	2010-2015	2015-2030
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Queens

residential units	0	7,861	2,306	5,450	581	0
commercial sq ft	0	7,683,000	979,490	1,470,000	656,206	0

Rockland

residential units	2,469	0	1,397	1,392	0	0
commercial sq ft	1,064,753	0	1,342,244	298,940	0	0

Richmond

residential units	0	421	637	0	0	0
commercial sq ft	0	165,000	305,371	0	0	0

Suffolk

residential units	0	610	1,347	484	3,493	0
commercial sq ft	473,000	213,000	759,000	1,791,000	5,253,000	389,000

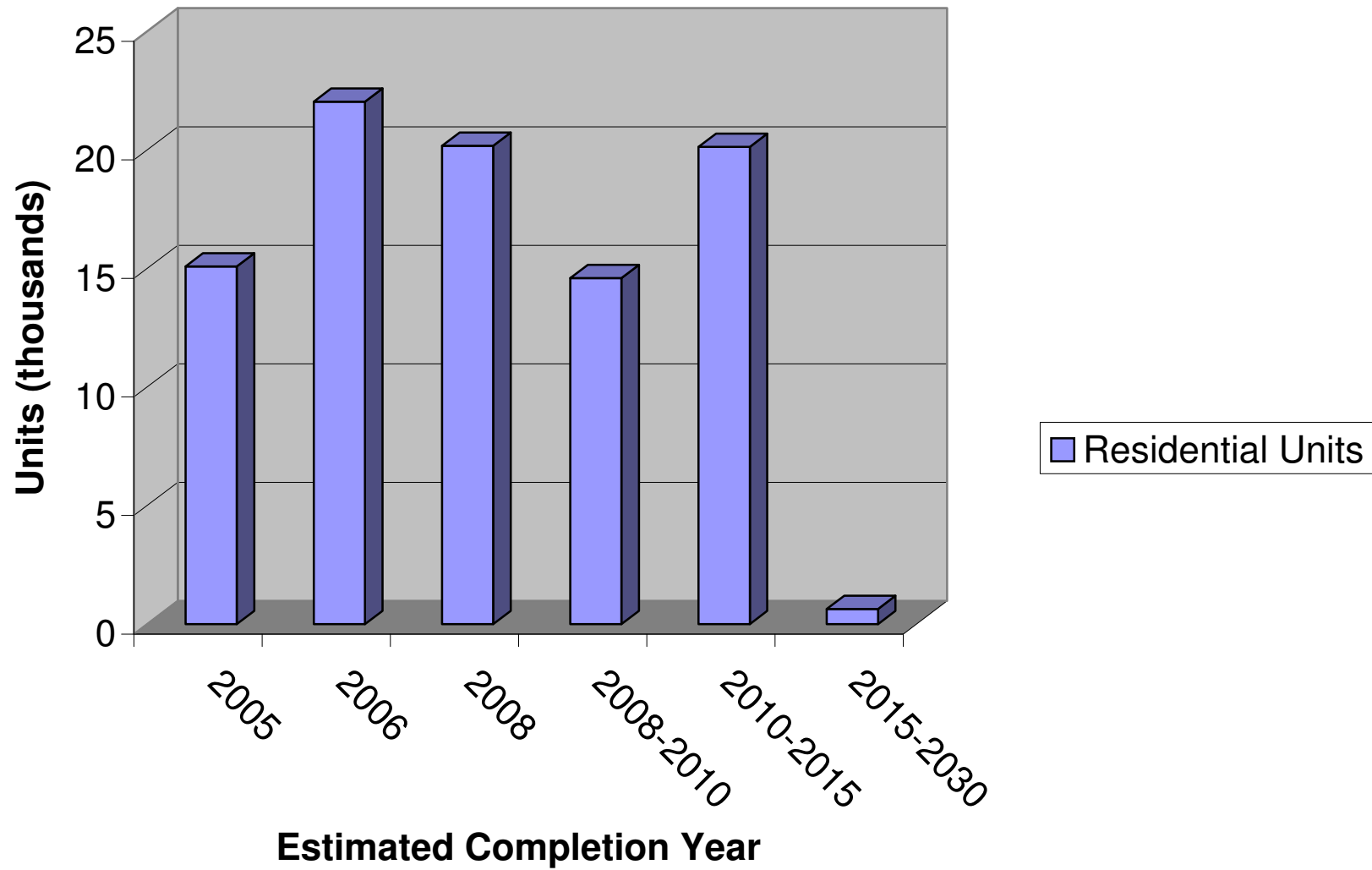
Westchester

residential units	1,220	2,501	3,504	1,507	1,562	0
commercial sq ft	1,330,251	2,663,948	1,686,914	1,206,500	185,000	0

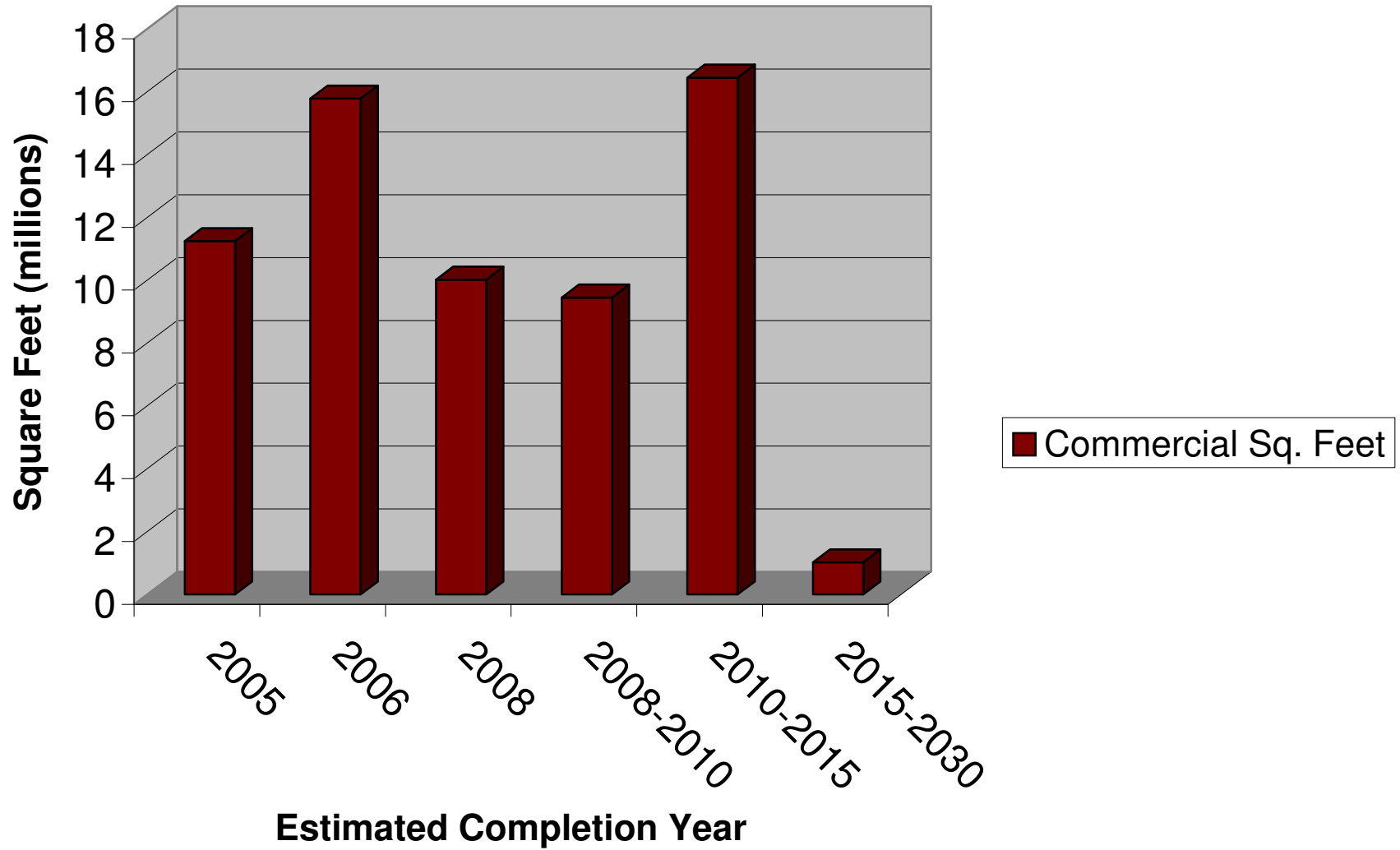
Totals

	2005	2006	2008	2008-2010	2010-2015	2015-2030
residential units (thousands)	15.082	22.04	20.18	14.598	20.135	0.64
commercial sq ft (millions)	11.250054	15.787663	10.021491	9.45193	16.451743	1.025

Residential Units by Completion Year



Commercial Square Feet by Completion Year



Future Development Inventory

BRONX COUNTY PROJECTS: SUMMARIES

DEVELOPMENT NAME	COMMUNITY or TOWN	LOCATION or ADDRESS	RES UNITS	RES SQ FT	COM SQ FT	MAN SQ FT	INFO YEAR	PROP YEAR	START YEAR	END YEAR	COMMENTS or NOTES	0	1	3	5	10	25
Brewery Site	CB01	Block is bounded by 159th Street to the north, St. Anns Avenue to the west, 156th Street to the south, and Eagle Avenue to east.	500		30,490						Pre-application phase of ULURP to rezone from manufacturing to residential with a commercial overlay. The development will include 37,232 SF of community facilities, and parking for 156 cars				✓		
Bronxchester URA Site 6	CB01	Brook, Bergen & Westchester aves.	100		50,000						This project requires a zoning change & change to the urban renewal plan which are ULURP actions. It is currently in the pre-certification phase of ULURP.			✓			
Bronxchester URA Sites 12	CB01	Third Ave bet. 154th St & 156th St.									This project requires no ULURP actions only disposition of property. It is currently in development				✓		
Bronxchester URA Sites 7a/7b	CB01	Brook, Bergen aves. & 149th st.			385,000						This project requires a zoning change & change to the urban renewal plan which are ULURP actions. It is currently in the pre-certification phase of ULURP.				✓		
La Casa de Felicidad	CB01	3079-3097 Third Avenue	85								Under-construction	✓					
Palacio del Sol	CB01	Melrose/Elton aves. Block 2378	124								Completed ULURP process & recently approved by City Council	✓					
Peter Cintron Apartments	CB01	768-776 Melrose Avenue	163	172,000	6,000						In ULURP			✓			
Tiffany Gardens Apartments	CB02	884-890 Southern Boulevard	105								Completed ULURP process & approved by City Council			✓			
Falcon Construction Group	CB03	East 165th Street bet Washington & Third aves				50,000					This site is being developed under an RFP with EDC			✓			
Katz Metal Fabricators & Universal Contracting	CB03	Washington Avenue b/t East 164th Street and East 165th Street				50,000					This site is being developed under an RFP with EDC			✓			
Plazolleta Hall	CB03	863 Melrose Avenue bet E.160 & 161St.	54								Expected to be ULURP certified in Spring 2004.			✓			
Taino Plaza	CB03	Washington Avenue and East 164th Street	105	105,000	18,400						Currently under construction	✓					
Villa Hermosa	CB03	825 Melrose Avenue	80								Under-construction			✓			
Washington Plaza	CB03	Brook, Washington aves & 163rd St, Block 2385			48,500						Approved by City Council last summer.			✓			
Gateway Center	CB04	201 Bronx Terminal Market			1,000,000						Lease signed, in planning stages				✓		
Jessup Heights Apartments	CB04	1490-1510 Jesup Ave	65	53,878								✓					
Meriam Avenue Apartments	CB04	1271-1285 Meriam Ave, Block 2529	84	76,714										✓			
Honeywell Avenue Apartments	CB06	Honeywell & Daly aves, Block 3121	79	72,600										✓			
Fordham Landing	CB07	Fordham Rd, Major Deegan, Harlem River, Block 3231	450	573,000							Currently in pre-certification phase of ULURP. This site will also include a 45,000 sf school & parking deck.				✓		
Orloff Apartments	CB08	Orloff Ave, Block 3263	100								Planned (but application not filed with DOB yet), as-of-right development.			✓			
Target Shopping Center	CB08	225th St bet Broadway & Exterior Streets			211,700					2004	As-of-Right development currently under construction. Should open mid 2004.	✓					

Future Development Inventory

DEVELOPMENT NAME	COMMUNITY or TOWN	LOCATION or ADDRESS	RES UNITS	RES SQ FT	COM SQ FT	MAN SQ FT	INFO YEAR	PROP YEAR	START YEAR	END YEAR	COMMENTS or NOTES	0	1	3	5	10	25
Soundview Senior Housing	CB09	685 White Plains Rd Block 3563	73	63,455				2004			Currently in pre-certification phase of ULURP, expect to certify early 2004			✓			
Vistamar Development	CB09	300 Zerega Ave. Block 3487	60								Currently in pre-certification phase of ULURP			✓			
Beatrice Catullo Houses	CB10	1425 Zerega Ave, Block 3970	84	61,648							Scheduled for vote by CPC in May			✓			
BJ's Wholesale	CB10	900 Brush Ave			130,000						Currently in pre-certification phase of ULURP			✓			
IUC Site	CB10	Fordham St & Eastchester Bay p/o Block 5643	68	141,478							Currently in pre-certification phase of ULURP				✓		
RAIN Senior Housing	CB12	3377 White Plains Rd, Block 4624	73	76,581							Scheduled for hearing by CPC in May. This project will also include a 12,945 sf senior center.			✓			
COUNTY TOTALS			2,452		1,880,090	100,000						0	5	16	6	0	0

Future Development Inventory

BROOKLYN COUNTY PROJECTS: SUMMARIES

DEVELOPMENT NAME	COMMUNITY or TOWN	LOCATION or ADDRESS	RES UNITS	RES SQ FT	COM SQ FT	MAN SQ FT	INFO YEAR	PROP YEAR	START YEAR	END YEAR	COMMENTS or NOTES	0	1	3	5	10	25
358-374 Vernon Ave C960537 HAK	Brooklyn	358-374 Vernon Ave	55						1997		UDAAP 55 units-sec202. CPC approval 4/97			✓			
460 Kent Ave - Certified lumber	Brooklyn	460 Kent Ave	600							2008					✓		
Atlantic Center Housing C970288 ZMK	Brooklyn	S Portland Ave, Atlantic Ave, Carlton Ave, Fulton St, Hanson Pl	450							1999	Partially Completed, under construction. CPC Approval 9/97 on hold - court injunction		✓				
Bensonhurst movie Theater/Retail	Brooklyn	1180 Shore Pkwy. Bayside Feul Site			43,500												✓
Bridge/water St	Brooklyn	61-73 Bridge St/247-255 Water St	98							2002		✓					
Council Tower IV C980584 ZMK	Brooklyn	1180 Pennsylvania Ave, Louisiana Ave	122						1998		Authorization to exceed ht, penetrate sky exposure plane. CPC Approval 7/98			✓			
Council Towers II N95011 HAK	Brooklyn	99 Vandalia Ave, Pennsylvania, Louisiana	122						1995		Authorization to exceed ht, penetrate sky exposure plane. CPC approval 3/95			✓			
Council Towers III N960657 HAK	Brooklyn	1170 Pennsylvania Ave, Louisiana Ave	122						1996		Authorization to exceed ht, penetrate sky exposure plane. CPC Approval 12/96			✓			
Cumberland Garden C970379 HAK	Brooklyn	713, 735 Atlantic Av, 407, 425 Cumberland St	105						1997		UDAAP & LDA - in Atlantic Terminal URA. CPC approval 10/97			✓			
Domsey, Glantz	Brooklyn	Kent & Wythe Ave Between 8th st and 11th st	540							2004		✓					
Downtown Brooklyn Rezoning	Brooklyn	Tillary St, Ashland Pl & Atlantic Ave	1,000		5,000,000					2014							✓
East New York I URA	Brooklyn	Van Sinderen, Linden, New Lots	550							2003		✓					
Elijah Smithj Sr Houses C960455 HAK	Brooklyn	383 Throop Av	91						1997		UDAAP & LDA, 91 units-sec202. CPC approval 1/97			✓			
Ellery Court Sr House C980540 HAK	Brooklyn	327-349 Ellery St & 13-15 Beaver St	87						1998		UDAAP & LDA. CPC Approval 9/98			✓			
Empire State Development Corp	Brooklyn	Schermerhorn between Hoyt and Smith St	440		105,000					2004		✓					
Fairway/Red Hook	Brooklyn	480-500 Van Brunt St			226,500					2003		✓					
Flatbush Junction	Brooklyn	Ave H, Flatbush, Nostrand Ave			457,000				2001		552 Space Parking+. CPC Certified 3/26/2001			✓			
Flushing/Bedford	Brooklyn	Rutledge, Lynch, Middleton, Lorimer, Marcy, Spencer, Flushing, Myrtle, Wallabout, Franklin & Kent	1,224							2010	CPC approval 3/00				✓		
Gateway Estates	Brooklyn	Flatlands, Fountain, Shore Pkwy	2,200		640,000					2002		✓					
Greenpoint/Williamsburg	Brooklyn	Newtown Creek N, Williamsburg S, McGuiness Blvd E, East River W	7,000		200,000					2014							✓
Harbor Tech	Brooklyn	Dwight & Delevan St	91							2001		✓					
Home Depot	Brooklyn	Bay 53rd St. & Cropsey Ave.			170,000					2001	CPC approval 10/27/1999	✓					
Huntington House Apt C980680 ZMK	Brooklyn	Smith, West 9th St and Huntington St	63						1999		M1-1 to R6, 63 units constructed. CPC Approval 4/99			✓			
IKEA	Brooklyn	Columbia and Halleck			371,000					2006	1,440 Parking			✓			
Internet Office	Brooklyn	Myrtle Ave and Flatbush Ave			620,000					2002		✓					
Jay st	Brooklyn	Front & York	182								Zoning map changed.				✓		
Kedem Winery	Brooklyn	Kent Ave and 8th St	410		23,360					2004		✓					
Kent Ave C990092 ZMK	Brooklyn	Kent Ave, Clymer St, Wythe Av, Div Av, Berry St, S 10 (Williamsburg I URA)	250								M1-2 to R6 & R7X. 190 units underconstruction. CPC Approval 2/99			✓			
Kings Plaza Expansion	Brooklyn	Ave U and 55th st			117,000					2004	518 Space Parking	✓					
Lowe's Gowanus Post Office Site	Brooklyn	2nd Ave Between			200,000							✓					

Future Development Inventory

DEVELOPMENT NAME	COMMUNITY or TOWN	LOCATION or ADDRESS	RES UNITS	RES SQ FT	COM SQ FT	MAN SQ FT	INFO YEAR	PROP YEAR	START YEAR	END YEAR	COMMENTS or NOTES	0	1	3	5	10	25
Main St (DUMBO)	Brooklyn	Main, Plymouth, Water St, Manhattan Bridge	165					1998			M1-2 to C6-2A, Permits to convert to 140+25 units. CPC approval 2/98			✓			
Marjorie Richardson Ct C970297 HAK	Brooklyn	359 Hendrix St	54					1997			UDAAP & LDA. CPC approval 8/97			✓			
Maujer St URP C970372 HDK	Brooklyn	Grand St, Lorimer St, tenevick St, Union, Ave	99					2000			33 3-family houses. CPC Approval 6/00			✓			
Mill Basin C950540A ZMK	Brooklyn	Flatbush Av, Ave U, Ave E, 64rd st, Mill Ave, Strickland	98					1996			M3 & M1 to R3-2 & R3-2/C2-2 (modification from R5 & R5/C-2). CPC approval 3/96				✓		
New Building	Brooklyn	1426C Loring St.	63					2001			DOB permit issue 1/29/2001	✓					
New Building	Brooklyn	543 Flushing Ave.	69					2000			DOB permit issue 11/28/2000	✓					
New Building	Brooklyn	180 Montague St.	186					2001			DOB permit issue 1/20/2001	✓					
New Building	Brooklyn	364 Vernon Ave.	55					2001			DOB permit issue 1/23/2001	✓					
New Building	Brooklyn	78 Troutman Ave.	82					2001			DOB permit issue 1/10/2001	✓					
New Building	Brooklyn	373 Dewitt Ave.	55					2001			DOB permit issue 1/10/2001	✓					
New Building	Brooklyn	1426 Loring Ave. .	65					2001			DOB permit issue 1/29/2001	✓					
New State Courthouse	Brooklyn	330 Jay St			700,000					2005	CPC approval 11/10/1999		✓				
Newswalk C000024 ZMK	Brooklyn	Pacific St Between Carlton & Flatbush Ave	90					2000			M1-1 to C4-2A Facil R dev, conver of mixed building. CPC approval 12/00				✓		
North Core Studios	Brooklyn	2326-2338 Pitkin Av	57					1997			UDAAP & LDA. CPC approval 9/97				✓		
Ocean Dreams	Brooklyn	Surf Ave W35 st to W 37 St	273							2005		✓					
Oceana	Brooklyn	Brighton Beach & Coney Island Ave	850							2005	5 to 12 stories in Phases, Phase one, 250 Units by 2002. Amen to cpc Special Permit 8/98		✓				
Pacific St	Brooklyn	Carlton, Bergen, Vanderbilt, and Pacific St	400											✓			
Park Plaza	Brooklyn	523 Kent Av	148					1999			8th amendment of williamsburg I URP, M to R. Rehab of M building. CPC Approval 2/99		✓				
Park Slope	Brooklyn	Warren, Union St, 3th ave, 4th ave, Prospect Park	1,135							2012							✓
Plaza de Los Ancianos C950300 HAK	Brooklyn	198-204 Bleecker St, 297-307 Wilson Ave	95					1995			UDAAP & LDA. CPC Approval 9/95				✓		
Rutledge Heywood C980403 ZMK	Brooklyn	Rutledge St, Wythe Av, Heyward st, Bedford Ave.	102					1999			M1-2 to R6 & M1-2 to R6/C2-2, 30 under construction. CPC Approval 2/99				✓		
Schaefer Brewery	Brooklyn	460 kent Ave	350		12,400					2004		✓					
Schermerhorn/Pacific ESDC Sites	Brooklyn	Smith, Schermerhorn, Hoyt St	600							2004		✓					
Smith St	Brooklyn	182-190 Smith St	64							2002		✓					
Troutman Senior Housing C000290 HAK	Brooklyn	68-82 Troutman St, 176-192 Evergreen Av	82					2000			UDAAP-in Bushwick II URA. CPC Approval 6/00			✓			
Venice Marina	Brooklyn	Sheepshead Bay			100,000									✓			
Washington St ZMK	Brooklyn	Water St, Adams St, York St, Main St (in DUMBO)	460					1999			M1-2 to M1-2/R8A, 60 units converted. potential for another 400 units. CPC Approval 3/99				✓		
Water St	Brooklyn	38-64 Water St	267							2002	Residential, retails, community facilities, and parking lot.	✓					
West Bushwick	Brooklyn	Flushing Ave, Evergreen Ave, Jefferson St, Bushwick Ave, and Beaver St	610							2005			✓				
West Bushwick	Brooklyn	Evergreen, Bushwick & Monroe	460							2002	Application to be CPC certified 5/7/01	✓					
West Bushwick Area C010123 ZMK C010124 HAK	Brooklyn	Central Ave, Noll St, Wilson Ave, Jefferson St	61								M1-1 to R6, UDAAP/LDA of 37 Central Ave			✓			

Future Development Inventory

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Williamsburg Bridge Area C980077 ZMK	Brooklyn	54th St, Kent Ave, East River South, 8th St, Havemeyer St	106						1998		Dev of 56 Units, 40 infill units & convert of 10 story loft building. CPC approval 3/98			✓				
110 Livingston St	Downtown	110 Livingston St	300		6,000						225 below-grade parking spaces							
223 Atlantic Ave	Downtown	223 Atlantic Ave (NRE corner of court St)	254		20,000					2004	700 car public Parking Facility	✓						
330 Jay St	Downtown	330 Jay St			950,000					2005	150 space parking		✓					
53 Boerum pl	Downtown	53 Boerum pl	99							2003	85 Space Parking	✓						
60-82 Washington St	Downtown	60-82 Washington St	254							2005			✓					
9 Metro Tech	Downtown	NW Corner Flatbush Ave Extension and Myrtle Ave			676,000					2003	272 Space Parking. Perior approval for 417,000 on 9/93	✓						
Atlantic Ave and Smith St	Downtown	Atlantic Ave and Smith St (Block 176)	50		55,000					2004	130 Space Parking	✓						
Atlantic Ave at NW Cornr of Court St	Downtown	Atlantic Ave at NW Cornr of Court St			10,900					2003		✓						
Atlantic Center	Downtown	Atlantic Ave and Portland Ave	711		1,270,000					2008	CPC Approval 9/1997				✓			
Atlantic Terminal	Downtown	LIRR Station			940,000					2004		✓						
BAM LDC East	Downtown	Block 2108 Bounded by Ashland Pl, Fulton, Lafayette, and St. Felix St		570,000	263,000						465 Space Parking			✓				
Bond St Garage	Downtown	Bond St and Livingston St			11,800													
Bridge Plaza	Downtown	Area Bounded by Tillary, Prince, Nassau, and Jay St	295							2004		✓						
Brooklyn Law School Dormitory	Downtown	State St and Boerum Pl	371							2004	212 Space Parking	✓						
City University	Downtown	Tillary St and Adams St			590,777													
City University	Downtown	Tillary St and Adams St			258,938													
ESDC/HS	Downtown	Block 170, S side Schermehorn between Hoyt and Smith	440		105,000					2004		✓						
Federal Court House	Downtown	NW Corner Adams St and Tillary St			700,000					2004		✓						
Ingersoll Community Center	Downtown	Myrtle Ave and Prince St	18,250															
Light Bridges	Downtown	100 Jay St	153		121,000					2005	280 Space Parking		✓					
New Brooklyn Polytech Dormitory	Downtown	Tech Pl and Jay St	675		90,000					2002	CPC Approval 9/20/2000	✓						
New York Marriott Broolyn Expansion	Downtown	Adams St N of Willoughby St			8,500					2005			✓					
Schermerhorn between Hoyt and Bond St	Downtown	Schermerhorn between Hoyt and Bond St (Block 927)	135		14,700					2004	50 Parking Space	✓						
Shops At Atlantic Center (Site 5)	Downtown	Atlantic Ave and Portland Ave	308											✓				
Site 5	Downtown	Johnson St and Gold St	60											✓				
South Portland Ave at Atlantic Ave	Downtown	South Portland Ave at Atlantic Ave (Block 2004)	96											✓				
St Francis College - Anthony J. Genovesi Center	Downtown	Joralemon St, Remsen St, Court St, Clinton St			12,350					2003		✓						
Sweeney Building Conversion	Downtown		87							2003		✓						
Brooklyn Navy Yard Expansion	Brooklyn				500,000													
COUNTY TOTALS			45,541		15,589,725								38	10	23	10	4	0

Future Development Inventory

NASSAU COUNTY PROJECTS: SUMMARIES

DEVELOPMENT NAME	COMMUNITY or TOWN	LOCATION or ADDRESS	RES UNITS	RES SQ FT	COM SQ FT	MAN SQ FT	INFO YEAR	PROP YEAR	START YEAR	END YEAR	COMMENTS or NOTES	0	1	3	5	10	25
Golden Age	Baldwin	Grand & Atlantic Avenues	59				2005	2003	2005	2006	under construction		✓				
Pergament site redevelopment	Bethpage	3901 Hempstead Tpk.			72,000		2005		2002	2004	now a Pathmark supermarket	✓					
Marriott Residence Inn	E. Garden City	Stewart Avenue	150 (hotel)				2005		2002	2003	completed	✓					
Meadowbrook Plaza S.	E. Garden City				214,000		2005				nothing active						
Nassau Educators Credit Union	E. Garden City	Roosevelt Raceway Site			49,000		2005		2001	2002	completed	✓					
New hotel development	E. Garden City	East Gate Boulevard	300 (hotel)				2005	2003	2005	2006	approval likely		✓				
Meadowbrook Pointe	E. Garden City	Roosevelt Raceway Site	720				2005	2003	2005	2007	obtaining final approvals			✓			
New office building	E. Garden City	600 Old Country Rd.			150,000		2005		2005	2007	approval unlikely			✓			
Archstone Communities	E. Garden City	Ellison Avenue	396				2005	1999	2004	2006	under construction		✓				
Red Roof Inn	E. Garden City	Roosevelt Raceway Site	100 (hotel)				2005		2001	2002	completed	✓					
Golden Age	E. Massapequa	Old Sunrise Hwy and Carmans Rd.	220				2005	2002			plan rejected by Town of Oyster Bay. Town is building soccer fields instead						
South Oaks (Lowe's)	E. Massapequa	N/Sunrise Hwy & N/Louden Ave.			161,000		2005				plan rejected by Town of Oyster Bay						
South Oaks Property	E. Massapequa	Sunrise Hwy / County Line Rd.	444				2005		2005	2007	obtaining final approvals			✓			
Curtis Blvd.	E. Meadow	Curtis Blvd.	500				2005	1991		0	completed	✓					
The Bristol @ East Meadow	East Meadow	Hempstead Tpk. / Merrick Ave.		124,979			2005		2003	2005	under construction		✓				
Golden Age	Farmingdale	Secatogue Ave. and Eastern Pkwy	170				2005	2003		?	completed	✓					
Rose Garden	Farmingdale	Melville Rd. and Conklin St.	66				2005	2000			approval denied						
Oceanwatch @ Freeport	Freeport	South Main Street	60				2005	2001	2005	2006	obtaining final approvals		✓				
Freeport Plaza West	Freeport	Sunrise Hwy / Church St.	235	220,000	60,000		2005		2005?	2007?	construction pending			✓			
Garden City Tower	Garden City	Roosevelt Field			90,000		2005				nothing active						✓
Avalon Bay at Glen Cove	Glen Cove	Glen Street	108				2005	2001	2001	2002	completed	✓					
Glen Cove Creek	Glen Cove	Glen Cove Creek			200,000		2005				Remove-replaced by Glen Isle (2)						
Glen Isle Development Co.	Glen Cove	North side of Glen Cove Creek	350				2005	2003	2006		Active						
Glen Isle Development Co.	Glen Cove	North side of Glen Cove Creek	250 (hotel)				2005		2006		Active						
Avalon Bay II	Glen Cove	Glen Street			70,000		2005		2005	2006	New name		✓				
Glen Head Commons	Glen Head	1 Robert Ln.	22				2005				plan rejected by Town of Oyster Bay						
Kensington	Great Neck	36 Bond St. and Nassau Drive	86				2005	1998		2005	under construction		✓				
Oxford Development	Great Neck	730 Middle Neck Rd.		80,560			2005				nothing active						✓
Washington Ave.	Harbor Isle	Washington Ave.	94					2001			?						
Hempstead Hub 3, 4, 5, 6	Hempstead	South Fulton Street			224,000		2005				nothing active						✓
Cantiaque Commons	Hicksville	499 W John St.	284				2005		2006	2008	obtaining approvals			✓			
✓	Hicksville	S/W. John St. & Charlotte Ave.			149,000		2005				plan rejected by Town of Oyster Bay						
New commercial development	Hicksville	John St.			18,000		1991				?						
New commercial development	Hicksville	299 Duffy Ave.			27,000		2005			0	completed	✓					
New commercial development	Hicksville	1000 Broadway			220,000		1990				?						
Public Storage	Hicksville	Old Country Rd.			75,000		2005		2003	2004	completed	✓					
Stop and Shop	Hicksville	S/Old Country Rd. & E/Charlotte Ave.			55,000		2005		2003	2004	completed	✓					
Target	Hicksville	Broadway Mall			139,840		2005		2003	2004	completed	✓					
Bay Harbour Mall Expansion	Inwood	Peninsula Boulevard			100,000						?						
L.M. Ericson	Jericho	LIE N. Service Rd. & Jericho Tpk.			123,000		1998				?						
New hotel development	Jericho	Jericho Tpk. & Brush Hollow	165 (hotel)				2005				nothing active						✓
Hamlet Estates	Jericho	Jericho Tpk. / Rt. 107	102				2005		2004	2006	under construction		✓				
We'Re Group	Jericho	Jericho Tpk. & LIE N. Service Rd.			121,000		2000				?						
La Rivage	Long Beach	Riverside Blvd. and E. Broadway	325				2005	2001			Recent public hearing						

Future Development Inventory

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La Rivage	Long Beach	Long Beach Blvd. & Broadway	100 (hotel)				2005				Recent public hearing						
Sea Pointe Towers	Long Beach	340 Shore Road	324				2005	1987			Tied up in court						✓
Christ Church Parish House	Manhasset	Northern Blvd & Plandome Rd	92				2005	1995			no further progress						
Hamlet Estates @ Kirby Hill	Muttontown	Jericho Tpk. / Kirby Ln.	87				2005		2004	2005	under construction		✓				
Stop and Shop	N. Bellmore	E/Newbridge Rd. and N/Charles Ct.			80,000		2005				project abandoned						
Former Triad VI	N. New Hyde Park	Marcus Ave.			217,000		2005		2003	2005	nearly completed		✓				
Grumman Property	Nassau	160 Grumman Rd. W				84,000	2005		2003	2004	Fed Ex Ground	✓					
New commercial development	North Hills	New Hyde Park Rd.			200,000		2005				nothing active						
Ritz-Carlton	North Hills	LIE S. Service Road	250 (hotel)				2005				nothing active						✓
Golden Age	Oyster Bay	Mill River Rd.	50				2005	2000			approval unlikely						
South St.	Oyster Bay	South St.	72				2005	2002	2005	2006	approval pending		✓				
Golden Age	Plainedge	Hempstead Tpk. & Dolphin Dr.	170				2005	2002			nothing active						✓
Home Depot	Plainview	S/Fairchild Ave. & E/Michael Ct.			114,000		2005				plan rejected by Town of Oyster Bay						
New commercial development	Plainview	Old Country Rd. & Round Swamp			420,000		2005		2002	2004	completed	✓					
Old Country Commons	Plainview	N/Old Country Rd. & W/Round Swamp			265,000		2005				nothing active						✓
Harbor Ridge Estates	Port Washington	Fairway Dr. and West Shore Rd.	324				2005	1997	2000	2004	completed		✓				
Delco Plaza Exp (Stop & Shop)	Port Washington N.	Shore Road			65,000		2005		2002	2003	completed		✓				
Mill Pond Acres	Port Washington N.	Harbor Rd. and Pleasant Ave.	246				2005	2001	2003	2005	under construction			✓			
Signature Place Apartments	Rockville Centre	80 - 100 Banks Ave.	349	310,000			2005				plan rejected by Village						
Nassau Commons Office Blding	Roosevelt	380 Nassau Rd.			24,000		2005				project abandoned						
Stop and Shop	Roslyn	Old Northern Blvd. & S. Skillman St.			63,000		2005				plan rejected by Village						
Stop and Shop / Toys R Us	S. Farmingdale	N/Motor Ave. & W/Main St.			81,500		2005		2005?	2006?	approval stalled		✓				
Treasure Island Marina site	Seaford	Marina Park Drive	60				2005	1987		0	Completed in the '90's						
Mall at Oyster Bay	Syosset	N/LIE & E/Robbins Ln.			750,000		2002				plan rejected by Town of Oyster Bay						
New commercial development	Syosset	N/25 & W/Lafayette Dr.			110,000		2005			0	K-Mart vacant						
EAB Plaza II	Uniondale	Hempstead Tpk.			325,000		2005		2006	2008	application yet to be filed			✓			
Knightbridge Properties	University Gardens	799 Northern Blvd.			55,000		2005		2002	2003	completed		✓				
130 Post Ave	Westbury	Post Ave. / Union Ave.	90				2005		2004	2005	under construction		✓				
Breslin	Westbury	W/Merrick Ave.			57,000		2005				nothing active						✓
Home Depot	Westbury	1300 Corporate Dr.			111,000		2005		2003	2004	Completed	✓					
Tilles	Woodbury	135 Crossways Park Dr.			125,000		2003				?						
Tilles	Woodbury	145 Crossways Park Dr. W.			65,000		2003				?						
COUNTY TOTALS			6,105		5,445,340	84,000						17	14	6	0	1	8

Future Development Inventory

NEW YORK COUNTY PROJECTS: SUMMARIES

DEVELOPMENT NAME	COMMUNITY or TOWN	LOCATION or ADDRESS	RES UNITS	RES SQ FT	COM SQ FT	MAN SQ FT	INFO YEAR	PROP YEAR	START YEAR	END YEAR	COMMENTS or NOTES	0	1	3	5	10	25	
Block 97 - South Street Seaport	Manhattan - CB1	Front St between Peck Slip and Beekman St	96						2004									
10 Liberty Street	Manhattan - CB1	10 Liberty Street	287						2002	2004		✓						
2 Gold	Manhattan - CB1	2 Gold Street, 95 Maiden Lane	605						2003	2005			✓					
97 Maiden Lane	Manhattan - CB1	97 Maiden Lane	583						2005	2007				✓				
11 William St.	Manhattan - CB1	11 William St.	455						2005					✓				
111 Washington St.	Manhattan - CB1	111 Washington St.	300						2006					✓				
NYU Downtown	Manhattan - CB1	52 Beekman St.	600						2006					✓				
10 Barclay St.	Manhattan - CB1	10 Barclay St.	374						2004	2006				✓				
Site 3 Battery Park City	Manhattan - CB1	Battery Place	440											✓				
Site 2a Battery Park City	Manhattan - CB1	Battery Place	282											✓				
Site 18b Battery Park City	Manhattan - CB1	North End Ave.	260											✓				
Site 19b Battery Park City	Manhattan - CB1	North End Ave.	330											✓				
Site 23 Battery Park City	Manhattan - CB1	North End Ave.	246														✓	
Site 24 Battery Park City	Manhattan - CB1	North End Ave.	345														✓	
Site 16/17 Battery Park City	Manhattan - CB1	North End Ave.	537														✓	
Site 5C	Manhattan - CB1	200 Chmabers St.	488														✓	
Site 5B	Manhattan - CB1	West St. between Murray and Warren St.	600														✓	
256 West St	Manhattan - CB1	256 West St.	68						2003	2004		✓						
88 Leonard St.	Manhattan - CB1	88 Leonard St.	230														✓	
Ponte Sites	Manhattan - CB1	West St. between Watsa and Vestry	470														✓	
473 Greenwich St	Manhattan - CB1	473 Greenwich St	50														✓	
5 Beekman St.	Manhattan - CB1	5 Beekman St	127						2003		conversion			✓				
100 Maiden Lane	Manhattan - CB1	100 Maiden Lane	325								conversion			✓				
10 Hanover Sq	Manhattan - CB1	10 hanover Sq	500						2004		conversion			✓				
15 William St	Manhattan - CB1	15 William St.	373						2003		conversion			✓				
90 West St	Manhattan - CB1	90 West St.	410						2003	2005	conversion			✓				
90 Washington St.	Manhattan - CB1	90 Washington St.	398						2002	2004	conversion	✓						
15 Broad St.	Manhattan - CB1	15 Broad St.	428						2003	2005	conversion			✓				
150 Nassau St.	Manhattan - CB1	150 Nassau St.	122						2003		conversion			✓				
67 Wall St.	Manhattan - CB1	67 Wall St.	350						2004		conversion			✓				
20 Exchange Place	Manhattan - CB1	20 Exchange Place	250						2004		conversion			✓				
63 Wall Street	Manhattan - CB1	63 Wall Street	475						2004		conversion			✓				
125 Church St	Manhattan - CB1	125 Church St.	50						2003		conversion			✓				
230 Broadway	Manhattan - CB1	230 Broadway	145						2004		conversion			✓				
Site 26, Battery Park City	Manhattan - CB1	West St. between Vestry and Murray			2,000,000				2005								✓	
WTC 7	Manhattan - CB1	Greenwich St			1,700,000				2003	2005				✓				
Freedom Tower	Manhattan - CB1	West St and Vestry St			2,600,000												✓	
NY Post Bldg	Manhattan - CB3	210 South St	650	552,500	35,000	200,000			2006	2010	M= Ministorage							✓
Seward Park	Manhattan - CB3	Delancy/ Essex Street	550	425,000	245,000				2006	2010	1000 units (potential additional)							✓
Lower East Side Girls Club	Manhattan - CB3	Ave C/ E. 11 Street			7,540				2005	2007	CF= 50,000 sq ft						✓	
Helena	Manhattan - CB4	600-657 W 57 St	635								under construct			✓				
500 W 56 St	Manhattan - CB4	500 W 56 St	305		35,000						under construct			✓				
Regent Tower	Manhattan - CB4	Eighth Ave & West 53rd/54th	400		11,630						under construct			✓				
Harwood	Manhattan - CB4	306 W 44th	241		12,432												✓	
Time Warner Center	Manhattan - CB4	Columbus Circle	225		2,100,000						nearly complete	✓						
Hearst Tower	Manhattan - CB4				737,000						under construct			✓				

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Hearst Tower	Manhattan - CB4	400 W 55th St	149		16,400						under construct		✓					
Clinton Mews	Manhattan - CB4	511 W 46th St	151								under construct		✓					
Pitcairn	Manhattan - CB4	505 W 47th St	113								2004-05	✓						
Pitcairn	Manhattan - CB4	755-765 Tenth Ave	84								under construct		✓					
Pitcairn	Manhattan - CB4	553 W 52nd St	96		4,000						2004	✓						
Pitcairn	Manhattan - CB4	552 W 53rd	53								2004	✓						
Image Group	Manhattan - CB4	Eleventh Ave & W 51st St			99,500						2004	✓						
HSBC Expansion	Manhattan - CB5	40th St and 5th Ave			189,000						2010						✓	
MOMA Expansion	Manhattan - CB5	midblock 53/54 sts., 5/6 aves.			184,585						under construct		✓					
2 Penn Plaza	Manhattan - CB5	31 St. & 7 Ave.			53,337						2010						✓	
350 Madison	Manhattan - CB5	Madison Ave & 45 St.			23,500						2010						✓	
Site 8N	Manhattan - CB5	42 St & 8 Ave.			1,100,000						2010						✓	
NY Times	Manhattan - CB5	40 St & 8 Ave.			900,000						2010						✓	
Marriott Hotel	Manhattan - CB5	1035 Avenue of the Americas			242,200						2010						✓	
Adorama	Manhattan - CB5	40 W 18 St.	60		86,000						2010						✓	
505 5 Ave.	Manhattan - CB5	5 Ave & 42 St.			250,000						2010						✓	
Red Roof Inn	Manhattan - CB5	32 St & 6 Ave.			171 rms						2010						✓	
Roseland Housing	Manhattan - CB5	239 W 52 St.	470								2025						✓	
Regent Tower	Manhattan - CB5	8 Ave btwn 53 and 54 sts.	352								under construct		✓					
150 E 44 St	Manhattan - CB5	150 E 44 St.	361								2010						✓	
Sixth Avenue Rezoning	Manhattan - CB5	five sites btwn 24 and 31 sts.	1,000								2010						✓	
Friars Tower	Manhattan - CB5	31 St btwn 6 and 7 aves.	500								2010						✓	
28 St. Garage	Manhattan - CB5	28 St btwn Park Ave So. And Lex Ave.			219 spaces						2010						✓	
Bush Tower Expansion	Manhattan - CB5	42 St. btwn 6 and 7 aves.			140,000						2010						✓	
48 E 21 St/260 Park Ave So.	Manhattan - CB5	Park Ave So. And E 21 St.	200								2010						✓	
1 Bryant Park	Manhattan - CB5	6th Ave btwn 42 and 43 sts.			1,800,000						2010						✓	
321 5th Ave.	Manhattan - CB5	5 Ave btwn 32 and 33 sts.	240								2010						requires CPC approval	
400 5th Ave.	Manhattan - CB5	5 Ave btwn 36 and 37 sts.	300								2010						requires CPC approval	
400 Park Ave So.	Manhattan - CB5	28 St and Park Ave So	279								2010						requires CPC approval	
Museum of Art and Design	Manhattan - CB5	Columbus Circle			50,000						2010						✓	
Ladies' Mile Rezoning	Manhattan - CB5	six sites in area 16-22 sts, 5-6 aves.	900								2010						✓	
Harlem Hotel	Manhattan- CB11	125th St/ Park Ave	100	125,000	368,000				2005	2007	EAS: 5/2004			✓				
Uptown New York	Manhattan- CB11	125th St/ 3rd ave												✓				
COUNTY TOTALS			20,013		14,990,124	200,000							8	24	19	4	23	1

Future Development Inventory

PUTNAM COUNTY PROJECTS: SUMMARIES

DEVELOPMENT NAME	COMMUNITY or TOWN	LOCATION or ADDRESS	RES UNITS	RES SQ FT	COM SQ FT	MAN SQ FT	INFO YEAR	PROP YEAR	START YEAR	END YEAR	COMMENTS or NOTES	0	1	3	5	10	25
The Highlands	Southeast	Independent Way			371,500						231,500 sf built	✓					
Sutton Park	Southeast	Sutton Place			216,054						project cancelled						
COUNTY TOTALS					587,554							1	0	0	0	0	0

Future Development Inventory

QUEENS COUNTY PROJECTS: SUMMARIES

DEVELOPMENT NAME	COMMUNITY or TOWN	LOCATION or ADDRESS	RES UNITS	RES SQ FT	COM SQ FT	MAN SQ FT	INFO YEAR	PROP YEAR	START YEAR	END YEAR	COMMENTS or NOTES	0	1	3	5	10	25
Vernon Blvd./35th Ave.	CB01	Blk. 322, Lots 101,112,118 and Blk. 327, part of Lot 1	350							2006	Application filed				✓		
Hunters Point Subdistrict Study	CB02	2nd St., 5th St. (west), 47th Ave., 44th Drive (north), 23rd St. (east), Sunnyside Yards (southeast), Queens-Midtown Tunnel, Border Ave. (south)	350							2013	ULURP CERTIFIED; CPC PUBLIC HEARING SCHEDULED FOR 5/26/04						
Long Island City	CB02	23rd. St., 43rd. Ave., 21st St., centerline of Queensboro Bridge approach, 23rd St., 41st Ave., 40th Rd., Northern Blvd., 41st Ave., Sunnyside Yards, Crane St., Jackson Ave.	300		5,100,000					2010	rezoning adopted July 2001; CONSTRUCTION UNDERWAY.		✓				
North Corona	CB03	32nd Ave., Astoria Blvd., 114th St., Roosevelt Ave., 89th St., 93rd St.	231		231,206					2013	rezoning adopted Sept. 2003						✓
Queens West	CB03	Newtown Creek, East River, Anable Basin, 5th St., 49th Ave., 50th Ave., 2nd St.	7,200		2,583,000					2012+	CONSTRUCTION UNDERWAY project has 3 stages - Stage 1: 1,366 units (957 already built); Stage 2 - 3,000 units; Stage 3: 2,834 units and 2,755,000 sq ft commercial		✓				
Elmhurst	CB04	45th Ave/83rd St. (Blk. 1536, Lots 201,210,215,247)	106		33,200					2006	application filed			✓			
Rego Park Mall	CB04	Junction and Queens Blvds. (Blk. 2080, Lot 101)	300	300,000	600,000					2005	Pre-application			✓			
35th Avenue/Prince Street	CB07	134-03 35th Ave. (Blk. 4949, Lot 46)	84		33,600					2007	application filed			✓			
Flushing Promenade	CB07	Roosevelt Ave./Janet Pl. (Blk. 4963, Lots 6,7,10,50,51)	352		20,000					2006	2nd waterfront certification pending			✓			
Muss/Flushing	CB07	College Point Blvd./Roosevelt Ave. (Blk. 5066, Lot 1)	1,200		700,000					2007	design underway - pre-application				✓		
Northern Blvd./Leavitt St.	CB07	35-36 Leavitt St. (Blk. 4960, Lot 29)	91		77,900					2007	Application filed			✓			
Riverview LSRD	CB07	College Point Blvd./5th Avenue (Blk. 3916, Lots 90,100,300,400)	225							2008	application filed		✓				
RKO Keith Redevelopment	CB07	Northern Blvd./Main St. (Blk. 4858, Lot 48)	150		118,790					2006				✓			
Queens Hospital Center ("T" Bldg.)	CB08	164th St./Grand Central Pkwy. (Blk. 6858, part of Lot 1)	150							2005	APPLICATION FILED. CERTIFICATION TARGET MAY OR JUNE '04.			✓			
Borough Hall Garage Redevelopment	CB09	Union Turnpike/126th St. (Blk. 9657, Lot 1)			425,000						pre-application						✓
Former St. Anthony's Hospital Site	CB09	89-15 Woodhaven Blvd.	136							2004	filed with DOB		✓				
Sapphire Estates	CB10	Linden Blvd. at 78th St. and South Conduit	250							2004	to file with DOB soon			✓			
Monte Excelsior Apartments	CB13	245-10,20,30 Grand Central Pkwy. (Blk. 8401, Lots 550,600)	133							2004	TARGETTING MAY 2004 CERTIFICATION.			✓			
Arverne URA	CB14	Beach 32nd St., Beach 84th St., Beach 74th St., Boardwalk, Rockaway Beach Blvd., Rockaway Fwy.,	3,900		770,000					2010	ULURP COMPLETE.						✓
Edgemere Infill	CB14	45-block area in Far Rockaway generally bounded by Beach 35th St., Rockaway Beach Blvd., Beach 49th St. and Conch and Norton Basins	690							2010							✓

Future Development Inventory

DEVELOPMENT NAME	COMMUNITY or TOWN	LOCATION or ADDRESS	RES UNITS	RES SQ FT	COM SQ FT	MAN SQ FT	INFO YEAR	PROP YEAR	START YEAR	END YEAR	COMMENTS or NOTES	0	1	3	5	10	25	
Ocean Bay	CB14	Rockaway Beach Blvd., Beach 60th St., Arverne Blvd. (Blk. 15901, Lots 8,57; Blk. 15900, part of Lot 4; Blk. 15890, Lots 54,58,62,64,66,69, part of 42)			96,000					2005	ULURP COMPLETE.							
COUNTY TOTALS			16,198		10,788,696							0	4	11	3	3	0	

Future Development Inventory

ROCKLAND COUNTY PROJECTS: SUMMARIES

DEVELOPMENT NAME	COMMUNITY or TOWN	LOCATION or ADDRESS	RES UNITS	RES SQ FT	COM SQ FT	MAN SQ FT	INFO YEAR	PROP YEAR	START YEAR	END YEAR	COMMENTS or NOTES	0	1	3	5	10	25	
Airmont Realty Venture	Airmont		144				1999											✓
Chestnut Ridge Senior Housing	Chestnut Ridge		58				1990				RSH							✓
Gould Academy (A/K/A Green Acres)	Chestnut Ridge			174,910			2003				R-40, LO							
Lecroy Research Systems Corp	Chestnut Ridge				88,713		2001				PI	✓						
Par Pharmaceutical	Chestnut Ridge				131,300		2002				PI	✓						
Rudolf Steiner Fellowship Foundation	Chestnut Ridge		77				2001				RR-50				✓			
303-9W Co. Llc	Clarkstown		91				1996				MF-2	✓						
Applewood Manor	Clarkstown		70				1961					✓						
Associates Of Rockland	Clarkstown		60				1982					✓						
Avalon Properties Inc.	Clarkstown						1996				MF-2	✓						
Bandy Lake II	Clarkstown		64				1986				RG-1	✓						
Boscov Department Store/Manuet Mall	Clarkstown				208,000		2001				MRS	✓						
Camp Ramah	Clarkstown				51,620		2000				R-160	✓						
Celtic Sheet Metal Inc.	Clarkstown				71,232		2003				LIO	✓						
Clarkstown (Parker-Nanuet)	Clarkstown						1994				LIO-PED	✓						
Clarkstown Executive Park	Clarkstown				148,150		2001				LIO				✓			
Costco Wholesale	Clarkstown				139,634		2001				PED				✓			
Demarest Mill Realty (Rockland Bakery)	Clarkstown				98,865		2001				LIO	✓						
Expo Design Center	Clarkstown				101,647		2001				RS	✓						
Gittelman Hebrew Day School	Clarkstown				60,820		2001				R-22/40				✓			
Hidden Ridge	Clarkstown						2003				MF-2	✓						
Jekar, Inc.	Clarkstown						1999				MF-3				✓			
Kingsgate "Lot D"	Clarkstown		155				1995				RG-2	✓						
Knolls East (Kingsgate - Section D)	Clarkstown		94	774,600			1993				RG-2	✓						
Long Clove Mews	Clarkstown						1997				MF-2							✓
Miller	Clarkstown						1993				MF-3				✓			
Mountain Shadows, Inc.	Clarkstown						1991				MF-2	✓						
New City Jewish Center	Clarkstown			50,432			2002				R-15	✓						
Normandy Village Company	Clarkstown						1996				MF-3	✓						
Parker-Nanuet	Clarkstown						1993				MF-2	✓						
Pelham West	Clarkstown		61				1994				R-15							✓
Reuben Gittleman Hebrew Day School	Clarkstown			60,280			2002				R-40/22				✓			
Sisters Of Charity	Clarkstown			69,418			2001				R-22							✓
Smith Farm	Clarkstown		74				2000				R224080							✓
Sopper Storage	Clarkstown				92,695		2003				LIO							✓
Stop & Shop Supermarket	Clarkstown				92,426		2002				CS	✓						
Sunrise Assisted Living Dev. Of New City	Clarkstown		76	57,526			1998				R-15	✓						
Town Garden (Aka Avalon & Parker/Nanuet)	Clarkstown						1995				MF-2	✓						
Tri-Murti Assoc. Llc	Clarkstown			100,225			2001				RS				✓			
Versailles Of Nanuet	Clarkstown						1997				MF-2	✓						
Mt.Carmel Bast/Mt. Carmel West Subdiv.	Haverstraw		146				1997				R-40,R6							✓
Terranova Hills	Haverstraw		61				1999				R-15,R1	✓						

Future Development Inventory

DEVELOPMENT NAME	COMMUNITY or TOWN	LOCATION or ADDRESS	RES UNITS	RES SQ FT	COM SQ FT	MAN SQ FT	INFO YEAR	PROP YEAR	START YEAR	END YEAR	COMMENTS or NOTES	0	1	3	5	10	25
Bayview Estates	Haverstraw Village		210				1991				PRD	✓					
Harbors Of Haverstraw Site A	Haverstraw Village		490				2003				WPD				✓		
Mountainside Development Corp.	Haverstraw Village		252				1997				R-2(M)			✓			
Prestige Motors	Hillburn				60,160		2000				HC&R-9			✓			
Oakwood Homes Complex	Kaser		50				1997				PD			✓			
East Coast Self Storage Co.	Montebello					103,350	2001				PI			✓			
Indian Rock Corporation	Montebello		95				1992				R-AH/NS	✓					
Lafayette Manor	Montebello		240				2000				P0	✓					
Montebello Commons	Montebello		176				1996				RSH	✓					
Yeshiva Darchei Noam	New Hempstead			78,623			2002				IR-40				✓		
Village Gate	Nyack		53				1995				R-1	✓					
(F/K/A Cardiovascular Research)	Orangetown				56,417		2003				LIO					✓	
Alternate Living Services	Orangetown		121				1999				OP			✓			
Alup Plastics	Orangetown					231,086	2002				LI			✓			
Assisted Living Services	Orangetown		79	66,671			1999				OP			✓			
Clarins Site Plan	Orangetown				240,690		2001				LIO			✓			
Dhs Systems	Orangetown				100,911		2000				LIO			✓			
Dominican College Site Plan	Orangetown			54,000			2002				R-40	✓					
Dy-Co Management Corp	Orangetown				493,000		2003				LIO			✓			
Innovative Plastics	Orangetown					147,411	2000				LI/CC			✓			
Keymed	Orangetown				98,879		2001				LIO			✓			
Lot 17 (Part)	Orangetown					231,00	2003				LI			✓			
Lowe's Home Center	Orangetown				144,00		2000				LI	✓					
Neuman Site Plan	Orangetown			139,282			2001				R-22			✓			
Orangeburg Warehouse Facility	Orangetown					101,186	2002				LI			✓			
Royal Caribbean Foods Plant	Orangetown					99,835	2003				LI				✓		
St. Thomas Aquinas College	Orangetown		300				1991				LO	✓					
Verizon Wireless (2000 Corporate Drive)	Orangetown				220,950		2003				LIO	✓					
Wyeth-Ayerst Site Plan - R & D Building	Orangetown					200,00	2001				LI	✓					
Piermont Court I & II	Piermont		90				1994				RD			✓			
Twenty-Eight Associates	Piermont		119				1998				RD			✓			
Hoffman Et Al	Ramapo		98				1996				R-15			✓			
Horizon Estates	Ramapo		60				2001				CS			✓			
Kollel Metzounim, Inc.	Ramapo		98				1997				R-15				✓		
Northern Metro Foundation/Heritage House	Ramapo		155				1990				RSH	✓					
Tallman Terrace	Ramapo		66				1990										
Yim Properties	Ramapo		78				1994				R-40A	✓					
Highland Homes Llc	Sloatsburg		321				2000				R-40				✓		
Rappino Subdivision	Sloatsburg		58				1990				R-1/R-2			✓			
Whispering Valley Subdivision	Sloatsburg		61				1994				R-40	✓					
Monsey Valley Plaza	Spring Valley			63,014			2001				GB				✓		
Snedden Place Development Corporation	Spring Valley		68				1995				GB	✓					
Summit Apartments	Spring Valley		96				1999				R-4	✓					
Wilder Property Companies, Inc.	Spring Valley		150				1991				R-3			✓			
Magee	Stony Point		80				1991				RR			✓			

Future Development Inventory

DEVELOPMENT NAME	COMMUNITY or TOWN	LOCATION or ADDRESS	RES UNITS	RES SQ FT	COM SQ FT	MAN SQ FT	INFO YEAR	PROP YEAR	START YEAR	END YEAR	COMMENTS or NOTES	0	1	3	5	10	25
Perrin-Tiorati Trails	Stony Point		56				1993				RR			✓			
Rider Hill	Stony Point		55				1992				RR			✓			
Stony Point Seniors Housing	Stony Point		115				2001				SRC	✓					
Stony Ridge Estates	Stony Point		52				1998				RR			✓			
Courtyard At Upper Nyack	Upper Nyack			54,000			2003				OR				✓		
Fairgrounds li	West Haverstraw		94				1991				R-4	✓					
Low Tor Condo Corp.	West Haverstraw			#VALUE!			1992				R-4	✓					
Terranova Development Corp.	West Haverstraw		57				1995				R-1	✓					
Village Center - Lot #3	West Haverstraw				149,828		2001				C				✓		
COUNTY TOTALS			5,324		2,705,937	682,868						44	0	34	17	0	0

Future Development Inventory

RICHMOND COUNTY PROJECTS: SUMMARIES

DEVELOPMENT NAME	COMMUNITY or TOWN	LOCATION or ADDRESS	RES UNITS	RES SQ FT	COM SQ FT	MAN SQ FT	INFO YEAR	PROP YEAR	START YEAR	END YEAR	COMMENTS or NOTES	0	1	3	5	10	25	
Tides at Charleston	Charleston	Arthur Kill Rd. & Kriescher St.	122						2003					✓				
Sweetwater Estates	Great Kills	Sweetwater & Nelson Avenue	186						1998				✓					
Butler Terrace	New Brighton	Butler Terrace	55						1999				✓					
Brookside Loop	Staten Island	Woodrow Road & Maguire Avenue	80						2003				✓					
Gateway Cathedral	Staten Island	200 Boscombe Avenue									expansion of church and parking lot for 990 cars				✓			
Grandview Plaza	Staten Island	2295 Forest Avenue			124,000				2002						✓			
Lowes Shopping Center	Staten Island	Arthur Kill Rd.			165,000				2003					✓				
Old Amboy Road	Staten Island	4255 Old Amboy Road			45,100				2002						✓			
Seaview Senior Housing	Staten Island	Brielle Avenue	515												✓			
Veterans Rd. West	Staten Island	Veterans Rd. West			136,271						parking for 467 cars				✓			
130 Bay Street Landing	Tompkinsville	130 Bay Street Landing	100						2002					✓				
COUNTY TOTALS			1,058		470,371							0	5	6	0	0	0	0

Future Development Inventory

SUFFOLK COUNTY PROJECTS: SUMMARIES

DEVELOPMENT NAME	COMMUNITY or TOWN	LOCATION or ADDRESS	RES UNITS	RES SQ FT	COM SQ FT	MAN SQ FT	INFO YEAR	PROP YEAR	START YEAR	END YEAR	COMMENTS or NOTES	0	1	3	5	10	25
South Oaks surplus land	Amityville	Sunrise Hwy & Country Line Road	136					2002			under construction end of 2004		✓				
Forest City Daly Housing	Bay Shore	Ocean Ave.	85					2000			don't know						
Bayport Meadows	Bayport	Church St. & Sunrise Hwy.	180					2002			disapproved						
Country View	Blue Point	Railroad and Blue Point Ave.	68					2003			still under review, maybe 2006				✓		
Park Place	Bohemia	Lincoln Ave. & Sunrise Hwy.	72					2003			uc frames up 3/2005		✓				
La Quinta Inn	Bohemia	Johnson Ave. & Aero Rd.	133 (hotel)				2003				uc foundation 3/2005		✓				
Sheraton Hotel	Bohemia						2001				delete						
New residential development	Brentwood	Wicks Rd. & William St.	85					1993			delete						
Heartland Town Center	Brentwood	Crooked Hill Rd. & Sagtikos Pkwy	2,000					2003			long term - may be 5 years or more down the road						✓
Heartland Town Center	Brentwood	Crooked Hill Rd. & Sagtikos Pkwy	300 (hotel)					2003			long term - may be 5 years or more down the road						✓
Heartland Town Center	Brentwood	Crooked Hill Rd. & Sagtikos Pkwy			200,000			2003			long term - may be 5 years or more down the road						✓
Heartland Town Center	Brentwood	W/Crooked Hill & N/Campus Rd.			500,000			2003			long term - may be 5 years or more down the road						✓
Barnes and Nobles	Bridgehampton	S/27 & W/Lake Rd.			90,000			2003			don't know						
Vineyard at Riverhead	Calverton	Route 58	89 (hotel)					2001			still proposed- may be aMarriot Courtyard or Hilton						✓
Riverhead Development Corp.	Calverton	Calverton Airport site	175 (hotel)					2003			still proposed - may include two golf courses						✓
Calverton Manor	Calverton	N/25 & W/Manor Rd.			102,000			3003			don't know						
Wal-Mart	Calverton	N/58 & Kroemer Ave.			135,000			2001			Lowe's is out, now it is a proposed Wal-Mart						✓
Costco exp.	Calverton	N/25 & W/Kromer Ave.			136,000			2004			DEC approval is holding this up and may kill it						✓
Vineyard at Moriches	Center Moriches	Brookfield Ave.	92					2002			Now called the Vineyard at Moriches, Co denial overridden in 2002						✓
New residential development	Centerreach	S. Colemand Rd. & Route 25	68					2002									
Engel Burman Senior Housing	Central Islip		230					2002									
Hampton Inn	Central Islip	Courthouse Dr. & Carleton	170 (hotel)					2001			should start construction soon			✓			
Wal-mart / Home Depot	Commack	E/Crokked Hill & N/Henry St.			336,000			2003			includes Kohl's, still proposed						✓
Beechwood	Coram	Granny Rd. & Elisha Overton Rd.	240					2001									
Crystal Harbor Construction	Coram	Mooney Pond Rd.	52					1999									
Klar	Coram	Shady Ln. & Route 112	140					2003									
Speigel Associates	Coram	Middle Country Rd.	200					2001									
Avalon Pines	Coram	CR 83 & Pine Rd.	450					1998									
Cabrini Gardens	Coram		66					2000									
Country View	Coram	Middle Country Rd. & CR 83	110					1998									
Fairfield at Pinewood	Coram	Route 112 & Pine Rd.	173					2001									
Fairfield Mill Estates	Coram	Elisha Overton Rd. & Mill Rd.	336					2002									
M & R Stony Brook Inc.	Coram	Route 112 at Washington Ave.			132,000			2003									
Tanger Outlet Center	Deer Park	N/Grand Blvd. & E/Commack Rd.			790,000			2004			still proposed, may be a couple years before construction or maybe never						✓
New shopping center	Dix Hills	S/25 & E/Dix Hills Rd.			69,000			2000			should start construction soon			✓			
Courtyard by Marriott	E. Farmingdale	Route 110 at Republic	141 (hotel)					2002			still proposed						✓
Marriott Residence Inn	E. Farmingdale	Route 110 at Republic	112 (hotel)					2002			still proposed						✓

Future Development Inventory

DEVELOPMENT NAME	COMMUNITY or TOWN	LOCATION or ADDRESS	RES UNITS	RES SQ FT	COM SQ FT	MAN SQ FT	INFO YEAR	PROP YEAR	START YEAR	END YEAR	COMMENTS or NOTES	0	1	3	5	10	25
New shopping center	E. Farmingdale	W/110 & S/Conklin St.			60,000		1997				still proposed						✓
Stew Leonard's	E. Farmingdale	W/110 & S/Conklin St.			122,000		2002				still proposed						✓
Wal-mart / Sports Authority	E. Farmingdale	E/110 & Michael Dr.			285,000		2002				This was changed to Wal-mart & Sports Authority and is still proposed						✓
LDO Ltd.	E. Moriches	Frowein Rd. & Gideon Blvd.	52					2002									
NE Site Development	E. Moriches	Montauk Hwy. & CR 51	168					2002									
New residential development	E. Moriches	Frowein Rd.	120					1992									
Heritage Square	E. Moriches	Smith St. & Tuthill Point Rd.	384					2003									
Matinecock Court	E. Northport	Pulaski Rd. & Elwood Rd.	155					1988									
Medical	E. Patchogue	Hospital Rd.			50,000		2002				this is at 100 Hospital Rd & is still proposed						✓
Reckson	E. Patchogue	Sunrise Hwy. & Hewlett Ave.			180,000		2002				this may not be built for a long time if ever						✓
LI Oyster Farm Property	East Marion	Shipyards La.	125 (hotel)				2003				still proposed						✓
New residential development	Eastport	E. Moriches Blvd. & Seatuck Ave.	70					2002									
Encore Atlantic Shores	Eastport	Eastport Rd. & Sunrise Hwy.	240					2001									
Regal Gateway	Eastport	CR 51 & Montauk Hwy.	220					2001									
Orchard Park	Elwood	Jericho Tpk. & Manor Rd.	180					2001									
Orchard Park	Elwood	Jericho Tpk. & Manor Rd.			60,000		2001										
Tritec Real Estate	Farmingville	LIE & N. Ocean Ave.			60,000		1998				still proposed						✓
Expressway Plaza exp.	Farmingville	W/North Ocean & S/Horseblock Rd.			101,000		2003				still proposed						✓
Staybridge Suites	Flanders	Route 24	72 (hotel)				1998				may never be built						✓
Sunset Builders Group	Farmingville	Horseblock Rd.	60					1999			this is in Farmingville (spelling error)						
Emanon Corp.	Gordon Heights	Middle Country Rd. & Swezeytown	70					2003									
Breezy Sound Corp.	Greenport West	North Rd.	68 (hotel)				2003				don't know						
Southampton Senior Apts.	Hampton Bays	Ponquogue Ave. & LIRR	69					2000			this has been proposed for awhile						✓
Stop & Shop	Hampton Bays	N/27A & W/CR 24			50,000		2003				not built yet						✓
Hospital site	Hauppauge	Rte. 347 & Rte. 111	58					2003			beginning demolition, new units probably in 2006			✓			
Hauppauge Office Park III	Hauppauge	878 Veterans Memorial Pkwy.			75,000		1999				still proposed						✓
Evangelista Property	Hauppauge	100 Motor Pkwy.			204,000		2003				still proposed						✓
Racanelli	Hauppauge	Wireless Rd.			120,000		1992				still proposed						✓
Home Depot	Hauppauge	S/LIE & W/111			140,000		1999				still proposed						✓
New residential development	Holbrook	Sunrise Hwy & Veterans Hwy	1,005					2001			probably not till at least 2006			✓			
New residential development	Holbrook	Broadway Ave. & Veterans Hwy.	131					2000									
Broadway Knolls	Holbrook	Broadway Ave. & Veterans Hwy.	284					2002			land cleared, end of 2005 SRCIT			✓			
A & J Realty	Holbrook	4800 Veterans Memorial Pkwy.			70,000		2003				construction stopped after digging hole for foundation, may resume and finish end of 2005 or not		✓				
Islip Town Center	Holbrook	Veterans Hwy. & Sunrise Hwy.			90,000		2002				at least 2006, maybe later			✓			
Islip Town Center	Holbrook	N/Sunrise Hwy. & E/Veterans Hwy.			600,000		2002				at least 2006, maybe later			✓			
Homewood Suites	Islandia	Veterans Memorial Hwy.	122 (hotel)				2000				nothing yet						✓
Motor Pkwy Associates	Islandia	Motor Pkwy. & Veterans Memorial Hwy.			75,000		2000				nothing yet						✓
Villages at Lake Grove	Lake Grove	Moriches Rd. & Route 347	228					2003			under construction 3/2005 SRCIT		✓				
Fairfield Ronkonkoma	Lake Ronkonkoma	Union Ave. near Mill Rd.	66					2002			don't know						
Story Book Meadows	Lake Ronkonkoma	Smithtown Blvd. & Marys La.	192					1997			drop from list						
Courtyard by Marriott expansion	Lake Ronkonkoma	Mill Rd. & Union Ave.	134 (hotel)				2002				completed 2003	✓					

Future Development Inventory

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Ronkonkoma Hub	Lake Ronkonkoma	Railroad Ave. E/Ronkonkoma Ave.			150,000		1998				not built						
Lake Shore Plaza III	Lake Ronkonkoma	N/Portion Rd. & E/Hans Blvd.			86,000		2000				not built						
Manorville Corporate Center	Manorville	Wading River Rd. & LIE			226,000		1999				may not be built for several years				✓		
Horizon Harbor Commons	Manorville	S/CR 111 & W/Chapmans Blvd.			73,000		1995				opened 2004	✓					
New shopping center	Manorville	W/CR 51 & S/CR 111			650,000		2001				not built yet				✓		
Mill Pond GC	Medford	Mill Rd. & Bellport Ave.	290					2003			still up in the air 3/2005 SRCIT						✓
Staybridge Suites	Medford	Route 112	72 (hotel)				2000				not built yet				✓		
Extended Stay America	Medford	LIE North Service Rd.	114 (hotel)				1999				not built						
New shopping center	Medford	N/Horseblock Rd. & E/North Ocean Ave.			102,000		2001				prbably will not be built						
Target	Medford	S/Horseblock Rd. & E/112			143,000						under construction 3/2005 SRCIT		✓				
Benjamin Development	Melville	Old East Neck Rd. & Old Country	100					2002			not built						
Paumanack Village V	Melville	Old East Neck Rd. & Old Country	100					2001			not built						
Sanctuary	Melville	Ruland Rd.	120					2000			not built						
Homewood Suites	Melville	Round Swamp Rd. & LIE	147 (hotel)				2003				no longer proposed						
Hilton Garden Inn	Melville	Round Swamp Rd. & LIE	174 (hotel)				2003				no longer proposed						
Expressway Corporate Plaza	Melville	S. Service Rd. & Walt Whitman Rd.			517,000		1999				don't know						
Lambda Electronics Bldg.	Melville	515 Broad Hollow Rd.			201,000						still proposed						✓
Reckson Executive Park	Melville	LIE S. Service Road			277,000		1998				no longer proposed						
Artistic Lake Group	Middle Island	Middle Country Rd.	62					2002			still proposed						✓
New residential development	Middle Island	Route 25 (opposite Woodville)	152					2001									
Country View	Middle Island	Miller Place - Yaphank Rd. and CR 21	50					2003									
K-mart Plaza exp.	Middle Island	N/25 & E/Currans Rd.			140,000		1995				drop from list						
New residential development	Miller Place	Route 25A & Sylvan Ave.	100					1999									
Alexan Miller Place	Miller Place	Miller Place - Yaphank Rd.	210					2003									
Alexan Miller Place	Miller Place	Miller Place - Yaphank Rd.	328					2003									
Alexan Miller Place	Miller Place	Miller Place - Yaphank Rd.	804					2003									
Timber Ridge at Villages	Miller Place	Mt. Sinai & Coram Rd.	185					2000									
Villages at Mount Sinai	Miller Place	Pine Stave Hollow Rd.	228					1997									
Vineyards at Miller Place	Miller Place	Route 25A & Sylvan Ave.	85					2002									
Waterways at Moriches	Moriches	Montauk Hwy.	410					2002			this is a proposal for 145 additional units to the 295 existing						✓
Moriches Center I	Moriches	S/Montauk Hwy. & E/James Hawkins			81,000		2002				still proposed						✓
Moriches Center II	Moriches	N/Montauk Hwy & W/Moriches-Mid I			147,000		2002				still proposed						✓
Greenview Properties	N. Great River	Connetquot Ave. & Sunrise Hwy.	256					2001			still in subdivision review, not till 2006 at earliest				✓		
New office building	Nesconset	Nesconset Hwy. & Southern Blvd.			89,000		1991				drop from list						
Home Depot	Nesconset	S/25 & Montclair			130,000		1997				drop from list						
Auto junkyard site	North Sea	Majors Path	50					2004									
Aquebogue Golf Resorts	Northville	Sound Ave. near West La.	80					2003			not till at least 2006						✓
Maryhaven Center of Hope	Pt. Jefferson Station	Oak St. & Sheep Pasture Rd.	145					2002									
Scro & Scro Properties	Ridge	Route 25 & Wading River Hollow	66					1999									
New residential development	Riverhead	Sound Ave. & Doctors Path						1998									
John Wesley Village III	Riverhead	Middle Rd.	92					2003									
North Fork Knolls	Riverhead	Cross River Dr. at Saw Mill Cr.	296					2002			still proposed						✓
Willow Ponds	Riverhead	Sound Ave.	220					2003									
New hotel	Riverhead	Main St. - adjacent to Atlantis Marine World	120 (hotel)				2002				still proposed, probably 2006 opening						✓

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New hotel	Riverhead	Route 58	91 (hotel)				2000				117 unit Marriot Courtyard or Hilton proposed in 2005 for 2006 opening				✓		
Rivercatwalk	Riverside	Route 24	140 (hotel)				2001				proposed for 2006						
Fairfield Rocky Point Staybridge Suites	Rocky Point	Route 25A & Hallock Landing Rd.	186					2001									
Extended Stay America	Ronkonkoma	Veterans Memorial Hwy.	100 (hotel)				2001				still proposed, probably will not be built					✓	
Reckson	Ronkonkoma	Veterans Memorial Hwy.			400,000		1997				still proposed, probably will not be built already built in 2002 as industrial space	✓					
Huntington Town House Hotel	S. Huntington	Jericho Tpk.	230 (hotel)				2001				still proposed, probably will not be built					✓	
Bulova Watch Factory site	Sag Harbor	15 Church Street	85					2001			still proposed, probably will not be built					✓	
Gyrodyne Property	Saint James	Rte. 25A	80					2002			may be bought by SUNY Stony Brook, otherwise it will be a couple years till construction				✓		
Warren Micciche	Saint James	Arlington Ave. N/25	62					2003									
New shopping center	Saint James	N/347 & W/Moriches Rd.			209,000		2001				may never be built						✓
New shopping center	Selden	N/25 & E/Marshall Dr.			200,000		1999				still proposed						✓
Tritec Real Estate	Setauket	Technology Dr. & Nesconset Hwy.			65,000		2000				still proposed						✓
Holiday Inn & Suites	Shirley	LIE & William Floyd Pkwy.	120 (hotel)				2003				still proposed						✓
Marshalls / Staples	Shirley	N/Montauk Hwy. & E/William Floyd			60,000		2002				still proposed						✓
Breslin	Smithtown	Rte. 25 & Brookside Dr.	174					2000			under construction, completion end of 2005		✓				
St. John's Glen	Smithtown	Route 25A	195					1997									
Lowe's	Sound Beach	N/25A & E/Westchester Dr.			176,000		1990				may or may not be built						
Engel Burman Senior Housing	Speonk	Old Country Rd.	189					2002			still proposed						✓
Casey Residence	Stony Brook	Nicolls Rd.	80					1992									
Avalon Bay	Terryville	Bicycle Path	232					1999									
Oaks at Hawkins Path	Terryville		56					2002									
Woodcrest Estates (Phase II)	Terryville	Route 347	216					2001			uc						
Shur Commons	W. Babylon	Route 109 & Badger Lane	74					2001									
Stop & Shop	W. Babylon	N/109 & W/Golding Ave.			66,000		2003										
LaSalle Academy	W. Sayville	Montauk Hwy.	142					1997			delete from list - LaSalle is now St. John's University						
New hotel	Wading River	Route 25A	50 (hotel)				2003										
New shopping center	Water Mill	N27 & W/Nowedonah Ave.			60,000		2002				still proposed						✓
Willoughby Commons	Wheatley Heights	201 Main Ave.	494					2001									
Belmont Villas	Wyandanch	Wyandanch Ave.	164					2001									
New shopping center	Wyandanch	E/Straight Path & N/Commonwealth Dr.			65,000		2000				may or may not be built						✓
Avalon	Yaphank		450					2003									
New residential development	Yaphank	Yaphank Ave.	190					1999									
Silver Corporate Park	Yaphank	LIE & N Service Rd. & Sills	450					2003									
Springhill Suites by Marriott	Yaphank	LIE & William Floyd Pkwy.	128 (hotel)				2000				may never be built or at least not for a long time						✓
Brookhaven Town Center	Yaphank	William Floyd Pkwy			1,000,000		1992				may or may not be built						✓
Brookhaven Town Center	Yaphank	W/William Floyd & S/LIE			850,000		1992				may or may not be built						✓
COUNTY TOTALS			16,483		10,995,000							3	7	7	13	44	4

Future Development Inventory

WESTCHESTER COUNTY PROJECTS: SUMMARIES

DEVELOPMENT NAME	COMMUNITY or TOWN	LOCATION or ADDRESS	RES UNITS	RES SQ FT	COM SQ FT	MAN SQ FT	INFO YEAR	PROP YEAR	START YEAR	END YEAR	COMMENTS or NOTES	0	1	3	5	10	25
Senior Citizen Housing Development [ARD 00-001]	Ardsley	Old Saw Mill River Rd (Rte 9A)	175								Site plan submitted by Planning Board for a 175-unit senior citizen residential development. Additional action includes the rezoning of easterly portion of property from CCH-2 to R-3 for development of eleven single family lots.				✓		
Bedford Park South Senior Citizen Development [BED 02-001]	Bedford	South Bedford Road	47								Proposed rezoning of a 12.6-acre site from R-2A Residence Two-Acre to EL Housing for the Elderly. The rezoning would permit the application for site plan approval of a proposed 47-unit residential development targeted to seniors age 62 and older.				✓		
The Garlands of Briarcliff Manor	Briarcliff Manor	Scarborough Road	385								Final EIS for proposed continuing care retirement community on a 58-plus acre site consisting of 315 independent living units (288 apartment units, 27 villa units), 40 assisted living units and 30 skilled nursing beds. Parking for 589 vehicles will be provided.				✓		
Entergy Generation Support Building	Buchanan	Indian Point Energy Center, 295 Broadway			100,000						Site plan received from the Village Board for construction of a 100,000 square foot, four-story office building to be located adjacent to existing support buildings on the Indian Point campus. The proposed building will utilize part on an existing parking.		✓				
Emery Ridge	Cortlandt	Croton Avenue	62								Proposed cluster open space subdivision to accommodate construction of 62 dwelling units and other related site improvements on 118 acres located on west side of Croton Ave, 500 feet north of Furnace Dock Rd.			✓			
Hilltop On The Hudson Subdivision	Cortlandt	Sprout Brook Road	52								Subdivision plan for proposed 52-lot subdivision of 121.7 acres property to accommodate construction of 52 detached single family homes.			✓			

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Jacobs Hill Crossing [CTD00-018]	Cortlandt	East Main Street (Rte 6)	54								Revised site plans for the development of a 34.4-acre site located on the north side of US Route 6, bounded on the east and north by the Bear Mountain Parkway and by the municipal border with the City of Peekskill on the west. The project would be a multifamily development, reserved for seniors, of 161 units in six 3-story buildings plus a recreation center. The unit mix is identified as 87 one-bedroom, 73 two-bedroom and one unit for a superintendent. Of the units, 102 would be rental and 58 would be condominium ownership. The price would be restricted on 110 units so as to meet Westchester County affordability guidelines							
Kirquel Development Ltd.	Cortlandt	Lexington Avenue	255								Proposed construction of a 255 residences comprised of 30 single-family townhouses, 145 rental units and 80 rental units for seniors. The buildings would be located in five clusters on a 50-acre site with frontage on the west side of Lexington Avenue.			✓				
Lakeland Acres	Cortlandt	Oregon Road	85								Site Plans for proposed cluster/open space subdivision for up to 85 townhomes/condos, 6 single-family homes, and an 18-hole golf course with a clubhouse, and other related site improvements (or) as an alternative, construction of a 145-unit major conventional subdivision.			✓				
Roundtop at Montrose [CTD00-011]	Cortlandt	Route 9A	92								SEQR findings statement and conditional approval as adopted by Cortlandt Town Board Oct. 11, 2001. The proposal is to construct a 92-unit rental apartment dwelling (including eight affordable units) with 141 parking spaces and associated sewage treatment plant.			✓				
Valeria	Cortlandt	Furnace Dock Road	253								Proposed cluster open space subdivision of 731 acres with 253 residential lots, proposed new roads, utilities and other proposed related site improvements.				✓			

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88 South Water Street	Croton	88 South Water Street	47								Application for a preliminary coastal site plan to change from one non-conforming use to another non-conforming use and to allow the construction of 47 condominium units with 94 parking spaces, 37 boat slips and other associated site work on a 1.8859 acre site.			✓				
Finkelstein Warehouse Expansion [CRO 02-010]	Croton	1 Hudson River Drive (Rte 9A)			41,292						Amended site plan for proposed construction of 41, 292 sq. ft. addition to existing warehouse of 77,619 sq. ft. for a total structure of 118,911 sq. ft. which will be used for storage and distribution of vehicular tires.	✓						
Elide Manor Apartments	Eastchester	Jackson Avenue	76								Proposed construction of a 4-story, 76-unit garden apartment building on approximately 1.35 acres containing 17 one-bedroom apartments and 59 two-bedroom apartments with on-site parking in a 3-level parking garage beneath proposed building.			✓				
Garson Brothers Development Corporation	Eastchester	70-80 Garth Road and 5 Greyrock Road	49								Proposed 49 unit, luxury rental apartment building with 100 parking spaces. If approved at the hearing a EAF will be prepared and submitted to the County for comment.		✓					
Avalon Green II	Greenburgh	Saw Mill River Road	794								The application proposes the subdivision (action by Planning Board) for 83 undeveloped acres in five tax parcels to create a 73-acre residential development lot and a 10-acre future office development lot; a site plan (Town Board) for development of 794 units.			✓				
Gel-Sprain R-20 Conventional Subdivision [GRB01-001]	Greenburgh	Ardsley and Sprain Roads	55								Final scoping for proposed subdivision of a 41.9-acre site to construct 55 single family homes and two public roadways off Ardsley Road.			✓				
Hackley School Replacement Buildings (02-001)	Greenburgh	292 Benedict Ave.			64,000						Findings Statement for proposed development of a new 64,000 sq. ft. middle school/science building, an addition to existing lower school building and improvements to landscaping, parking and site access.		✓					
Landmark at Eastview [01-004] [00-014]	Greenburgh	Old Saw Mill River Road			445,000						Resubmission of proposal to develop a 320,000 sq. ft. laboratory and a 125,000 sq. ft. athletic training facility.	✓						

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Union Baptist Church	Greenburgh	31 Manhattan Avenue			64,655						Proposed construction of new 64, 655 sq. ft. Church Sanctuary and Education/Administration building with expanded ancillary parking facilities.		✓					
Wylidwood Zoning Map Amendment [GRB 00-001]	Greenburgh	Old White Plains Road	86								Zoning map amendment submitted by Town Board that would permit an 86-unit clustered development. The development would comply with the objectives of the Town's Conservation District (CD) overlay.			✓				
250 Westchester Avenue Office Building [02-032]	Harrison	244-250 Westchester Avenue			68,558						The project as proposed consists of construction of a four-story office building with a net floor area of 68,558 square feet at 250 Westchester Avenue. The new building would be on a 7.4-acre site that already includes an existing office building.		✓					
Harrison Executive Park	Harrison	3000-3040 Westchester Avenue			51,354						Proposed addition of a 48,354 sq. ft. four-story office building and a 3,000 sq. ft. one-story bank building to existing office park site.			✓				
Purchase Corporate Park (02-008)	Harrison	Manhattanville Road			76,710						A proposed three-story, 76,710 sq. ft. office building with associated roadway, parking lot and utility improvements.			✓				
Riverwalk Village Residential Development	Hastings	Saw Mill River Road (Rte 9A)	157								Revised site plans for proposed rezoning of a 7.45-acre site from Limited Industrial to Multifamily Residence to accommodate construction of a 157-apartment market-rate residential development consisting of 8 residential buildings with on-site recreation.			✓				
LEW02-KLSD Katonah Lewisboro School District; FEIS Addendum (01-022)	Lewisboro				108,000						Addendum to FEIS for proposed construction of a 108,000 sq. ft. of new building floor area, 222 new parking spaces, and the acquisition of 8.75-acres for playing fields and parking to take place on six different sites within the towns of Lewisboro and Bedford.		✓					
Forest City Daly Mixed Use Development	Mamaroneck	Madison Avenue	186								Draft environmental impact statement for proposed zoning map and text changes and special permit approval for the construction of a mixed-use development containing 186 proposed rental units with structured parking and commercial uses.				✓			

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Westchester Day School [01-025]	Mamaroneck	860 Orienta Avenue			44,000						A proposed modernization of an existing school through the construction of a new 44,000 square-foot classroom. The new building will feature 25 new classrooms while 13 existing classrooms will be decommissioned to be used for other school functions.		✓					
Mount Kisco Senior Condominiums	Mt Kisco	North Bedford Road	48								Proposed construction of a three-story, max height 33', 48-unit independent living condo development on a 2.13-acre parcel to include parking for a total of 72 vehicles provided on site.			✓				
The Premier Collection	Mt Kisco	Kisco Avenue			86,000						Proposal to construct a 28,000 sq. ft. sales and corporate headquarters building, and a 58,000 sq. ft. service building for a multi-line car dealership and service center on a 17.53 acre site. The project would include a 1/4-mile driving safety center.		✓					
Pace University Health & Fitness Center [MTP00-006]	Mt Pleasant	Bedford Road			75,000						75,000 sq.ft. health and fitness center on Pleasantville's Pace University campus in an area currently occupied by approx. 144 space parking area, construction of new surface parking areas as well as altering existing parking areas for a total of 2,089 parking spaces.		✓					
Westchester University - Legion of Christ, Inc	Mt Pleasant	Columbus Ave., Stevens Ave., and West Lake Drive			1,053,500						Site Plan and special use approvals for development of University containing buildings and facilities having a total floor area of 1,053,500 sq. ft. to accommodate a total enrollment of 3000 students.			✓				
Equine Properties Corp Apartments	Mt Vernon	543 North MacQuesten Parkway	77								The applicant is proposing to construct an eight-story apartment building consisting of 77 apartments.		✓					
Liberty Plaza	Mt Vernon	South 7th Avenue	120								Site plan and FEIS referred by City Council to utilize air rights above existing Mount Vernon Hospital parking garage to develop a 120-unit senior independent living facility with capacity for 140 residents. 22,152 square feet of office space are also proposed.		✓					
Woodcrest at Leonard Park (MTK02-014)	Mt. Kisco	Route 172 (South Bedford Park)	124								Statement of findings for proposed mixed residential development to include a 90-unit senior housing condominium complex in 3 buildings (with 66 units affordable), and 34 single family attached residences in 17 buildings.			✓				

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The Home Depot [02-002]	Mt. Pleasant	Saw Mill River Road			113,540						Revised Home Depot proposal consisting of a "reduced scale" 113,540 square foot building, including a 92,448 square foot one story warehouse style retail building, 2,373 square foot vestibule and an attached and partially covered 18,720 square foot garden center.	✓						
Green Ridge Affordable Housing Project	New Castle	Armonk Rd (Rte 128) Sheather & Harriman Roads	125								A proposal to develop 125 units of affordable housing on a 15-acre portion of two disconnected parcels that have a total area of 104.8 acres. Included in the submission are a conceptual site plan (11" by 17") dated May 31, 2002.			✓				
Iona College Athletic/Student Union Building [02-022]	New Rochelle	715 North Avenue			40,750						FEIS for the proposed construction of a two-story student union building of 40,750 square feet, expansion of the Mulcahy Campus Center with a new two-story athletic facility of 44,154 square feet, expansion of the Ryan Library.		✓					
Iona College Dormitory [01-034] [00-018]	New Rochelle	North Avenue	358								Proposed rezoning of site for the construction of two new 6-story dormitory buildings to house 358 students on 3.62 acres in a CR-1 zoned district (College and College Related Uses).		✓					
New Roc Tower Mixed Use Development [NRO 01-032]	New Rochelle	Huguenot Street	154		149,600						Proposed Final EIS for a proposed mixed use development featuring 149,600 sf of retail space, 154 market rate residential units and 237 parking spaces for the residential units in a basement garage.			✓				
Willows Towers Senior Living Retirement Community	New Rochelle	341-357 Pelham Road; 32-34 Willow Drive	126	118,689							Findings statement received for the proposed construction of a new 8-story, 126-unit, 118,689-gross sq. ft. senior living retirement community on a 75,000 s.f. site.			✓				
Monroe College Six-Story Dorm [02-005]	New Rochelle	368 Main Street	100	52,980	1,410						Proposed removal of an existing retail building and construction of a 100-room, 52,980 sq. ft. six-story dormitory building with 1,410 sq. ft. of retail space on the first floor fronting Main Street on a 0.6 acre site.		✓					
Rockwell Terrace Senior Housing	New Rochelle	120 and 129 Lockwood Ave.	72								Resolution for proposal to construct 72 rental units, seven-story apartment building for seniors with parking underneath on a .34-acre lot and additional parking off-site.	✓						

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MBIA Headquarters Expansion [02-005]	North Castle	113 King Street			180,000						FEIS for proposed rezoning of 22.14 acres from R-1A to DOB-20A to assemble a 44.01-acre site to accommodate construction of a 165,000-plus sq. ft. office expansion, parking structure, 15,000-plus sq. ft. meeting house and associated amenities.			✓				
Marriott Fairfield Inn	North Salem	Hardscrabble Road	62								Lead Agency notice and site plans for a proposed action that consists of the development of a 62 unit Marriott "Fairfield Inn" motel with parking for 80 vehicles plus development of on-site water supply wells to serve the proposed motel.			✓				
Harbor Square	Ossining	Westerly Road Way	180		14,500						Public Hearing notice and Special Use Permit for proposed mixed use development to include 180 rental apartments (78 two-bedroom, 84 one-bedroom and 18 studio units) of which 10% (18 units) would be targeted as affordable.		✓					
9-11 Corporate Drive Redevelopment (White Plains Linen)	Peekskill	9-11 Corporate Park Drive			100,000						Findings Statement for proposed construction of a 100,000 sq. ft. new industrial laundry facility with the capacity for an additional 25,000 sq. ft. expansion as a second phase. Project includes parking for 150 vehicles which could be expanded to 200.		✓					
Riverbend	Peekskill	250 South Street	221								Amended Findings Statement regarding the proposed development of up to 221 residential units on property located in the WF-PRD District.		✓					
Water Street Corp.	Peekskill	199, 200, 210 North Water Street	150								Site plan for proposed development of a 150-unit multi-family building and accessory 50 boat slip marina on properties located in the WF-1 and WF-2 district.							
Marbury Corners Residential Development	Pelham	First Street, between 5th and 2nd Avenues	70								Public hearing notice for a site plan application to construct a 70-unit condo and townhouse project on a 1.2-acre site located to the northwest of the Pelham Metro-North train station. The project, proposed by Ginsburg Development Corp.	✓						

Future Development Inventory

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Marina Redevelopment Project (Waterfront at Port Chester) [PC01-010]	Port Chester	Marina Redevelopment Urban Renewal Project Area			493,000						The project as approved includes construction of a 14-screen movie theater, a 127,000 square-foot Costco Warehouse Club store, a 4,800 square-foot restaurant and retail space in six buildings. The entire project is proposed to include 493,000 square feet.	✓						
Wellington Greene Town & Country Condominiums	Port Chester	408-412 Westchester Avenue	38								Applicant proposes to build a five-story, 68-unit condominium development on about .92 acres at 408-412 Westchester Avenue (County Road 112). The property is located adjacent to the Port Chester YMCA near South Regent Street.		✓					
The Stanwich School	Rye Brook	1100 King Street			175,000						The action concerns development of a new school facility for the Stanwich School, a private K-grade 12 institution now located in Greenwich. The project would include approximately 175,000 square feet in 10 buildings with additional recreation fields.			✓				
Scarsdale (Saxon Wood Rd) Assisted Living Facility [01-001]	Scarsdale	25 Saxon Wood Road	115								Findings Statement for proposed construction of a 115-unit assisted living facility for the elderly on a 5.83 acre site in Scarsdale and 1.14-acres in White Plains.			✓				
Ichabod's Landing Riverfront Development	Sleepy Hollow	River St. and Beekman Ave.	44		2,900						Findings statement a proposed mixed-use riverfront development on 3.4 acres of upland area of a 5.2 acre site. The mixed-use concept proposes 44 townhouse units, 2,900 s.f. of retail space and 131 off-street parking spaces.	✓						
Kendal-on-Hudson	Sleepy Hollow	701 North Broadway	225								Site plans for a proposed continuing care retirement community located on the Phelps Hospital property consisting of a 450,000 sq. ft. building that would include 225 independent living apartments, 40 assisted living units, and 42 private skilled nursing units.	✓						
Lighthouse Landing (GM Site)	Sleepy Hollow	199 Beekman Avenue	1562		185,000						Positive Declaration and draft scoping document received from the Village Board for proposed development of a mixed use waterfront project on the former GM Site. The materials described that project as 1,562 residential units, 185,000 square feet of retail.						✓	

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DEVELOPMENT NAME	COMMUNITY or TOWN	LOCATION or ADDRESS	RES UNITS	RES SQ FT	COM SQ FT	MAN SQ FT	INFO YEAR	PROP YEAR	START YEAR	END YEAR	COMMENTS or NOTES	0	1	3	5	10	25	
Eagle River Subdivision	Somers	Primrose & Amawalk	117								Proposed preliminary subdivision of a 628 acre tract into 117 single family residence on property located primarily in the R-120 residence district.							
Whitehall Corners	Somers	Rte 35/100	6		35,750						Site Plans for proposed development of 41.6-acre site into residential and office use to include six single-family lots and roadway and development of office space and parking.			✓				
Crescent Associates Office Building	Tarrytown	155 White Plains Road			60,000						Site plan for the proposed construction of a 3-story office building totaling 60,000 square feet including associated asphalt parking, grading, landscaping and a drainage/stormwater system.			✓				
Ferry's Landing Subdivision	Tarrytown	West Main Street	100								Proposed mixed-use development including renovation of an existing office building, relocation of industrial equipment, construction of two new office buildings, construction of a ferry terminal and construction of 100 residential townhouse units.							✓
Jefferson Union Senior Housing	Tuckahoe	Jefferson and Union Places	43								Lead Agency Notice for proposed construction of a new 43-unit affordable rental senior housing project with a 28-space parking garage and related site work, located adjacent to an existing senior housing building. The proposed building would be 4-stories.							
221 Main Street Redevelopment	White Plains	221 Main Street	200		500,000						Draft EIS for proposed construction of two connected buildings with a total of 1.06 million sq. ft. of floor area and 1,365 parking spaces in a shared parking facility. The buildings would have a height of 350 feet.			✓				
City Center	White Plains	Main-Mamaroneck	600		600,000						Findings for construction of a retail, entertainment and residential complex at the Macy's building in downtown White Plains. The retail and entertainment component would occupy approx. 600,000 gross sq. ft.							✓
Kensico Terrace	White Plains	24 South Kensico Avenue	42								One year extension of approval for proposed construction of five story, 42-unit apartment building containing 29 one-bedroom units for seniors, four one-bedroom affordable units, and nine two-bedroom affordable units, with 33 parking spaces .							✓

Future Development Inventory

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New York Presbyterian Hospital Expansion [02-003]	White Plains	21 Bloomingdale Road			384,000						One-year extension of approved site plan to construct a 384,000 sq. ft. medical research/proton beam treatment facility on NY Prebysterian Hospital campus.		✓					
The Jefferson at White Plains [02-013]	White Plains	300 Mamaroneck Avenue	281		4,000						Proposed request for extension of a previously approved site plan and special permit for construction of a luxury rental residential apartment complex consisting of a total of 281 luxury dwelling units located within an 8-story, 75 foot high mid-rise residential building.	✓						
Windsor Terrace Windsor Terrace	White Plains	10 Windsor Terrace	71								Site Plans for proposed 71-unit, 10-story condo apartment building containing 10, one-bedroom, and 61 two-bedroom units with 140 off-street parking spaces located in an underground parking garage.		✓					
"Teutonia Hall Project"	Yonkers	41-51 Buena Vista Ave.	40								Proposed construction of a multi-family dwelling with 40 units along with 18,500 square feet of commercial and retail space. While the proposed construction will be new, the project will make use of the existing street facades on the site.		✓					
2141 Central Park Avenue	Yonkers	2141 Central Park Avenue			49,969						Construction of a 49,969 sq. ft. commercial retail building with associated parking area on a 4.57-acre site.		✓					
Hidden Ridge Cluster Development	Yonkers	Morrow and Depew Avenues	45								Revised site plans for proposed development of a gated Planned Cluster Development on an approx. 8-acre parcel. Revisions indicates building of 45 homes, instead of 48; unit mix changed from 40 duplex units and 8 single family homes to 36 duplex units.		✓					
Main St. Office/Retail Bldg./Amendment to Conceptual Development Plan	Yonkers	Main & Buena Vista			70,000						Lead Agency notice for proposed amendment to Yonkers Conceptual Development Plan for the Waterfront Development, Phase I project in order to accommodate construction of an approximately 70,000 sq. ft. office building.		✓					
Millennium Tower	Yonkers	1077 Warburton Avenue	79								The applicant seeks to build a 79-unit apartment , nine-story rental apartment building in a mid-rise residential district. Ten units (or 12.7 percent) of the units are set aside as affordable. The project includes a swimming pool and 112 underground parking spaces.						✓	

Future Development Inventory

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Nepperhan Valley Technology Center	Yonkers	470 Nepperhan Avenue			100,000						Lead Agency notice for the proposed rehabilitation and reuse of an approximately 100,000 square foot industrial building for office and laboratory use. The building is located on a 2-acre site on the southeast corner of Nepperhan Avenue and Axminster Street.		✓					
Ridge Hill Village Center	Yonkers	1 Ridge Hill	800		1,206,500						Draft scoping document for the development of a mixed-use project with 1,206,500 square feet of retail/restaurant/entertainment space, a 350-room full-service hotel and conference center, 156,000 square feet of office and research facilities, 800 residential units.				✓			
Sunrise Development, Inc. [YON 02-011]	Yonkers	65 Crisfield St	79								Slightly revised plans for the demolition of an existing church and single-family residence and the construction of a 79-unit residential health care facility for the elderly (assisted living) that will incorporate a new replacement church.		✓					
SJMC Senior Residence	Yonkers	122 South Broadway	82								Proposed construction of a new 82-unit building containing 81 units of independent supportive housing for the elderly, one two-bedroom apartment for resident superintendent. Proposed design calls for a rectangular 10-story structure.		✓					
Warburton Avenue River Club [00-007] [99-030]	Yonkers	1105-1135 Warburton Avenue	500								The applicant, Ginsburg Development Corporation, had at the time of the draft EIS submittal, proposed to construct a 524 unit rental housing development (with 58 affordable units) on a 4.6-acre site, consisting of 45 studio, 303 one-bedroom and 176 two-bedroom units.				✓			
Yonkers Downtown Ball Park [02-048]	Yonkers	Nepperhan, Main Palisade, School			100,000						Revised FEIS for the proposed construction of a 6,500-seat minor league baseball park with 100,000 square feet of ancillary street-level retail surrounding the park on a 9.2-acre site known locally as "Chicken Island."				✓			
Yonkers Green Affordable Housing (aka) Fr. Pat Carroll's Green	Yonkers	Nepperhan/Ashburton Avenues	62								Proposal submitted by the Yonkers CDA to subdivide a 5.4-acre parcel, known as the Ashburton/Madison Urban Renewal Area, to permit development and construction of sixty-two 2-family homes for affordable housing.		✓					

Future Development Inventory

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Six-Story Residential Building	Yonkers	180-202 McLean Avenue	45								The project as proposed consists of the construction of a new six-story, 45-unit apartment building with ground floor retail. The project would also include an adjacent one-story retail building with parking above it.		✓					
Sun Homes (Crestwood Town Homes)	Yonkers	737 Scarsdale Road	40								Lead Agency notice for proposal to develop approx. 10-plys acre site with 40 dwelling units in a semi-attached cluster located in the S-100 Zone.		✓					
Sunrise Development, Inc.	Yonkers	65 Crisfield Street	79								Special use permit application for the demolition of an existing church and a single-family residence and the construction of a 79-unit residential health care facility for the elderly (assisted living) that will incorporate a new replacement church.		✓					
Stop and Shop Supermarket	Yonkers	Zavier Drive & Vredenburg Avenue			75,519						FEIS for proposed conversion of a 75,500 sq.ft. multi-use commercial building to a modern Stop & Shop supermarket on a 8.4-acre site which is part of the Cross County Shopping Center.	✓						
McCann Real Equities	Yorktown	Rte 202			53,000						Site plan referred by Planning Board for construction of retail center (68,600+ sq.ft.), including a 53,000+ sq. ft. supermarket on a 14.2-acre parcel.		✓					
Pulte Homes	Yorktown	Route 202 Bear Mountain Extension	44								Notice of intent to prepare a draft EIS for proposed subdivision of 99.5 acres to accommodate building of 44 new single family homes, with a new 4,320 foot internal roadway system which will have direct access to Rte 202.			✓				
Temple Israel Project	Yorktown	Mohansic Ave Rte 202			40,000						Proposed site plan consisting of the construction of a 40,000 square foot religious building with associated school on a 12.2-acre site. The site, which is currently vacant, surrounds an existing gas station on the southwest corner of Crompond Road.			✓				
Jefferson Valley Mall	Yorktown	Route 6 & Lee Blvd			60,106						Preliminary site plan submitted for a 60,106 sq. ft. expansion of Macy's department store with parking lot reconfiguration. 240 new parking spaces will be added in a new elevated structure.		✓					

Future Development Inventory

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Senior Housing Development [00-007] [99-015]	Yorktown	N.E. Corner Rte 6 & Barger Rd.	208								The project as proposed consists of the construction of a 208-unit rental apartment building for senior citizens to be located on the east side of Barger Street near the intersection with Route 6.							
COUNTY TOTALS			10444		7,072,613							9	43	30	5	1	0	

Appendix 3

PIN	PIN2	PIN3	PROJ_NAME	LETD	DATE	COMPLET	QA	SEPTEMBER	APRIL	REMARK	F2002B	F2005T	F2007T	F2010P	F2020P	F2025P	F2030P
001620			NY112 REC I495-OLD TOWN	2007	12/2009	N	Y		Y					Y	Y	Y	Y
001621			NY112 R&P OLD TOWN-TERRYVL	2006	12/2008	N	Y		Y					Y	Y	Y	Y
004196			NY25 REC NY111-NY347	5/2006	2009	N	Y		Y					Y	Y	Y	Y
004198			NY25, TOTTEN TO DEER PARK	DELETED	DELETED	D											
004202			NY25 REC NY347-S HOWELL	9/2005	10/2007	N	Y		Y				Y	Y	Y	Y	Y
004205	004202		NY25 REC NY347-OAK ST			K											
004215	004197		NY25 REC CR83-NY112			K											
004216	004197	004217	NY25 REC NY112-WINFIELD			K											
004217	004197	004216	NY25 REC WINFIELD-CR21	2012	2/2014	N	Y		Y					Y	Y	Y	Y
004224	0T1223		NY25 PARK & RIDE CONSTRUCTION	5/2001		K											
005408	005409	005410	NY 347 RECONSTRUCTION	04/2008	2013	N	Y		Y					Y	Y	Y	Y
005409	005414	005412	NY 347 RECONSTRUCTION	04/2009	2013	N	Y		Y					Y	Y	Y	Y
005410	005411	005412	NY 347 RECONSTRUCTION	01/2010	2013	N	Y		Y					Y	Y	Y	Y
005411	005408	005409	NY 347 RECONSTRUCTION	04/2010	2013	N	Y		Y					Y	Y	Y	Y
005412	005408	005409	NY 347 RECONSTRUCTION	2008	2013	N	Y		Y					Y	Y	Y	Y
005890			NY27 SR CON PHYL-STATION	DELETED	DELETED	D	Y		Y								
007708			NY111 REC NY454-NY347	04/2009	06/2010	N	Y		Y					Y	Y	Y	Y
011247	051641		NY110 REC I495-NSP			K											
011248			NY110 REC NSP-SHWAB RD	DELETED	DELETED	D	Y		Y								
011330			NY27A 3R WELLWOOD-NY109	2/2004	7/2005	N	Y		Y		Y	Y	Y	Y	Y	Y	Y
012111			NY106 REC NY25A-BERRY HL	DELETED	DELETED	D	Y		Y								
022860			LIE HOV - EXIT 57 TO 61 4TH LANE CONST	1998	2001	N	Y		Y		Y	Y	Y	Y	Y	Y	Y
022862			LIE HOV - I495 SERVICE ROAD CONSTRUCTION EX 63-01	01/2001	12/2003	N	Y		Y		Y	Y	Y	Y	Y	Y	Y
022865			LIE HOV - SERVICE ROAD CONST EX 65-67	03/2000	12/2003	N	Y		Y		Y	Y	Y	Y	Y	Y	Y
022867	X22867		I-495/CIP INTERCHANGE IMPROVEMENT			K											
022881			LIE HOV - EXIT 61-64 4TH LANE CONST	06/1997	12/2001	N	Y		Y		Y	Y	Y	Y	Y	Y	Y
022882	X22867		I-495 4TH LANE EX 30-32			K											
022895			LIE HOV - I-495 4TH LANE EXITS 32-36	03/1999	4/2001	N	Y		Y		Y	Y	Y	Y	Y	Y	Y
022896	022895	022902	LIE HOV - I-495 4TH LANE REC EXITS 32-37	04/2002	5/2005	N	Y		Y		Y	Y	Y	Y	Y	Y	Y
022897			LIE HOV - I-495 4TH LANE EXIT 36-40 PHASE I	03/1999	4/2001	N	Y		Y		Y	Y	Y	Y	Y	Y	Y
022898	022896	022900	LIE HOV - I-495 4TH LANE BRI EXITS 37-38			K											
022899			LIRR/I495 BR @ ROSLYN RD			E											
022900	022916		LIE HOV - I-495 HOV LANE CONST FROM EXIT 37-40	8/2002	5/2005	N	Y		Y		Y	Y	Y	Y	Y	Y	Y
022904			I495 4TH LN DEMO EX36-40			E											
022908			LIE HOV - I-495 BRIDGE WIDENING EXITS 49-57	2/2010	8/2011	N	Y		Y					Y	Y	Y	Y
022914	0T1232		LI TRAVEL + INFO CENTER			E											
022916	022900		I495 4TH LANE BRI EX 39-40			K											
032775	032775		NY25A REC COLD SPRNG-108	11/98	12/2000	N	Y		Y		Y	Y	Y	Y	Y	Y	Y
051641	011247		NSP/NY110 INTERCHANGE RECONSTRUCTION	5/2007	7/2010	N	Y		Y					Y	Y	Y	Y
052323			MSP/SSP INTERCHANGE REC	4/2008	12/2010	N	Y		Y					Y	Y	Y	Y
052324			MSP NB CD CON RTE 24-AVE C	DELETED	DELETED	D											
053464	053464		ITS MONITORING SYSTEM FOR SSP	2003	2004	N	Y		Y		Y	Y	Y	Y	Y	Y	Y
053465			SSP WB ON-RAMP CONSTRUCTION INTERCHANGE 43	05/1999	8/1999	N	Y		Y		Y	Y	Y	Y	Y	Y	Y
075598	075662		RECONSTRUCTION OF CR16, PORTION ROAD	4/2006	2010	N	Y		Y					Y	Y	Y	Y
022913			OLD NICHOLS ROAD OVER I-495 BRIDGE REPLACEMENT	2001	6/2002	E	Y		Y		Y	Y	Y	Y	Y	Y	Y
075614			RECONSTRUCTION OF CR 67, MOTOR PARKWAY	1/2006	2009	N	Y		Y					Y	Y	Y	Y
075656			CR3 PINELAWN ROAD FROM THE VICINITY OF RULAN	11/2006	2009	N	Y		Y					Y	Y	Y	Y
075660			CR97 REC I495-NY25	HOLD	HOLD	N											
075661			CR97 REC NY25-NY347	HOLD	HOLD	N											
075668			RECONSTRUCTION OF COUNTY ROAD 80, MONTAUK	10/2006	2009	N	Y		Y					Y	Y	Y	Y
075669			RECONSTRUCTION OF CR 57 BAYSHORE ROAD	2007	2010	N	Y		Y					Y	Y	Y	Y
075670	075614	075599	CR67 REC I495 EX55-CR17	3/2007	2010	N	Y		Y					Y	Y	Y	Y
075671			CR3/SSP BRIDGE WIDENING	12/2004	2007	N	Y		Y			Y	Y	Y	Y	Y	Y
075672A	075672B		CLOSED LOOP	10/2004	2007	E	Y		Y			Y	Y	Y	Y	Y	Y
075674	075598	001620	CR16 REC I495-CR21	4/2007	2012	N	Y		Y					Y	Y	Y	Y
075675A	075598	001620	CR16 REC CR83-I495	12/2007	2012	N	Y		Y					Y	Y	Y	Y
075676	SC5521		CONSTRUCTION OF RIGHT TURN LANES CR3 WELLW	2004	2006	N	Y		Y				Y	Y	Y	Y	Y

Appendix 3

PIN	PIN2	PIN3	PROJ_NAME	LETD	DATE	COMPLET	QA	SEPTEMBER	APRIL	REMARK	F2002B	F2005T	F2007T	F2010P	F2020P	F2025P	F2030P
075681			CR83/495 BRI WIDEN	9/2004	3/2006	N	Y		Y				Y	Y	Y	Y	Y
075682			1996 TRAFFIC SIGNAL COMPUTER EXPANSION 1996	01/1997	1/1999	C	Y		Y	COMPLETE	Y		Y	Y	Y	Y	Y
075684			RONKONKOMA RR STA PARKING 2	2000	4/2002	N	Y		Y		Y		Y	Y	Y	Y	Y
075727	0T0968		TRAFFIC SIGNAL COMPUTER EXPANSION 1998	09/1998	1/2002	C	Y		Y	COMPLETE	Y		Y	Y	Y	Y	Y
075734	0T0968		TRAFFIC SIGNAL COMPUTER EXPANSION 1998	12/1998	12/2002	C	Y		Y	COMPLETE	Y		Y	Y	Y	Y	Y
075739			PATCHOGUE RIVER MARITIME CENTER - RIVERWALK	6/2004	9/2005	N	Y		Y	NOT CODAB							
075743			BROOKHAVEN AIRPORT ACCESS ROAD	2006	10/2008	N	Y		Y	NOT CODAB							
075745	0T1286		MILL POND CONNECTOR ROAD	2003	2007	N	Y		Y				Y	Y	Y	Y	Y
075747			SMITHTOWN CBD - HIGH PRIORITY PROJECT (NO 140)	2002	12/2003	N	Y		Y		Y		Y	Y	Y	Y	Y
075813	0T1762		TRANSIT BLOCK- LI BUS	2003	2003	C	Y		Y	COMPLETED							
075814	080696	0T1762	SC INNOVATIVE TRANSIT	2001	2001	C	Y		Y	COMPLETE	Y		Y	Y	Y	Y	Y
075824	0T1244		OLD COUNTRY ROAD INCIDENT MANAGEMENT SYSTEM	12/2004	12/2005	N	Y		Y		Y		Y	Y	Y	Y	Y
080170	0T1223	004224	NY106/107 PRK & RIDE LOT	2002	12/2004	N	Y		Y		Y		Y	Y	Y	Y	Y
080659	0L7700		SUFFOLK COUNTY EXPRESS TO EASE CONGESTION	1998	1999	C	Y		Y	COMPLETE	Y		Y	Y	Y	Y	Y
080726	0T1762		TRANSIT BLOCK - MERRICK SHUTTLE	2002	2002	C	Y		Y	COMPLETE	Y		Y	Y	Y	Y	Y
0T0944			NY 347 RECONSTRUCTION NY 454 - NY 111	DELETED	DELETED	D	Y		Y								
0T0945			NY 347 RECONSTRUCTION NY 25 - CR 97	DELETED	DELETED	D	Y		Y								
0T1091	075819		TRAFFIC SIGNAL COMPUTER EXPANSION 2000				K										
0T1157			WEST SHORE ROAD RECONSTRUCTION	2006	12/2008	E	Y		Y	NOT CODAB							
0T1223	004224	080170	NY25 PARK & RIDE CONSTRUCTION				K										
0T1232	022914		1998 REST AREA/MM TRANS				K										
075753	0T1155	0T1326	2009 TRAFFIC SIGNAL COMPUTER EXPANSION 1999	1/2004	1/2006	N	Y		Y				Y	Y	Y	Y	Y
0T1526			COMPUTERIZED TRAFFIC SIGNAL SYSTEM UPDATE	2004	12/2005	N	Y		Y		Y		Y	Y	Y	Y	Y
0T1762	075814	090696	INNOVATIVE TRANSIT BLOCKOUT	2003	2003	N	Y		Y	NOT CODAB							
800320	812609		TACONIC STATE PARKWAY STAGE 5	4/2005	11/2007	N	Y		Y				Y	Y	Y	Y	Y
801012			ROUTE 9: ROUTE 301 TO I-84	9/2012	12/2014	N	Y		Y					Y	Y	Y	Y
803210			OLD MAMARONECK RD INTERCONNECTION	12/2003	2006	N	Y		Y				Y	Y	Y	Y	Y
804406	M3020922		GOLDENS BRIDGE PARKING				K										
804407		M3020922	GOLDEN'S BRIDGE PARKING				K										
809941	894004		ATMS AND ATIS AT CROSS COUNTY PKWY	12/2004	2008	N	Y		Y					Y	Y	Y	Y
810141	894004		ATMS AND ATIS AT HUTCHINSON RIVER PKWY	7/2004	7/2005	N	Y		Y		Y		Y	Y	Y	Y	Y
810322			RT. 9A; RT. 119-RT. 100C	3/2007	2011	N	Y		Y					Y	Y	Y	Y
810622	894004		ATMS AND ATIS SPRAIN BROOK PKWY	5/2008	5/2009	N	Y		Y					Y	Y	Y	Y
810623	894004		ATMS AND ATIS SPRAIN BROOK PKWY	12/2008	12/2009	N	Y		Y					Y	Y	Y	Y
811008	875686		SEE 875686				K										
811336			I-684/HARLEM DIV. PARKING	2004	7/2006	N	Y		Y	NOT CODAB							
811902			GROVE STREET EXTENSION	12/2013	7/2015	D	Y		Y	DELETED							
812644	812696		TSP: ROUTE 6-ROUTE 202	05/2000	8/2001	N	Y		Y		Y		Y	Y	Y	Y	Y
813064			ROUTE 22: 1-84 - CR 65	04/2005	2010	N	Y		Y					Y	Y	Y	Y
813075	802611		RT. 120: RT. 22-1684	10/2006	7/2010	N	Y		Y					Y	Y	Y	Y
821669	894004		ATMS AND ATIS AT SAW MILL RIVER PKWY	5/2007	5/2008	N	Y		Y					Y	Y	Y	Y
821670	894004		ATMS AND ATIS AT SAW MILL RIVER PKWY	7/2008	7/2009	N	Y		Y					Y	Y	Y	Y
839059			RT. 6: STRAWBERRY-RT. 132	1998	8/2001	C	Y		Y	COMPLETE	Y		Y	Y	Y	Y	Y
856116			RT. 35/202; PEEKSKILL-TSP	9/2007	2012	N	Y		Y					Y	Y	Y	Y
872930	872957	872951	I-287 I-87-RT. 120 STAGE 1	02/2001	04/2004	N	Y		Y		Y		Y	Y	Y	Y	Y
872951	872930	872952	I287 I87-CWE STAGE 2 SMRP-BPR	03/2002	06/2005	E	Y		Y		Y		Y	Y	Y	Y	Y
872952	872930	872951	I287 STAGE III - BRONX RIVER PKWY TO WHITE PLAIN	11/2005	2007	E	Y		Y					Y	Y	Y	Y
872957	872930	OLDH19	I287 I87-CWESTAGE 1 TZ-INTER8	2/2001	4/2004	N	Y		Y		Y		Y	Y	Y	Y	Y
872959	872951	872952	I287 STAGE 2A - INTERCHANGE 5	11/1999	1/2002	C	Y		Y	COMPLETE	Y		Y	Y	Y	Y	Y
875480			KIMBALL & MCLEAN AVENUE TRAFFIC SIGNAL IMPROV	3/2004	10/2007	N	Y		Y				Y	Y	Y	Y	Y
875523			NEW HEMPSTEAD ROAD EXTENSION	12/2005	12/2008	N	Y		Y					Y	Y	Y	Y
875608			NORTH AVENUE TRAFFIC SIGNAL IMPROVEMENTS	11/2000	12/2003	C	Y		Y		Y		Y	Y	Y	Y	Y
875678			CROTON STATION PARKING	02/1999	1999	N	Y		Y		Y		Y	Y	Y	Y	Y
875685			SUFFERN RR PARKING	2004	2009	N	Y		Y					Y	Y	Y	Y
875686			WESTCHESTER CITY SIGNALS	5/2002	5/2004	N	Y		Y		Y		Y	Y	Y	Y	Y
875691			BREWSTER NO RR PARKING	1998	1999	N	Y		Y		Y		Y	Y	Y	Y	Y
875693			YORKTOWN PARK & RIDE LOT	2004	2006	N	Y		Y		Y		Y	Y	Y	Y	Y

Appendix 3

PIN	PIN2	PIN3	PROJ_NAME	LETD	DATE	COMPLET	QA	SEPTEMBER	APRIL	REMARK	F2002B	F2005T	F2007T	F2010P	F2020P	F2025P	F2030P
875757	RTP0100		NEW CITY PARK & RIDE	2004	2006	N	Y	Y					Y	Y	Y	Y	Y
875758			BRONX RIVER PARKWAY TO YONKERS AVENUE EXIT	05/2005	9/2007	N	Y	Y					Y	Y	Y	Y	Y
880546			VM SIGNS-REGIONAL HWYS	7/2010	7/2011	N	Y	Y						Y	Y	Y	Y
880598	872930	872951	HUDSON VALLEY TRANSPORTATION MANAGEMENT C	2001	2004	N	Y	Y			Y	Y	Y	Y	Y	Y	Y
880697	8T9713		PUTNAM EXP BUS PARKING	2005	2005	N	Y	Y			Y	Y	Y	Y	Y	Y	Y
880834	880598		WHITE PLAINS INTEROPERABLE COORDINATED SIGN	2004	2004	N	Y	Y			Y	Y	Y	Y	Y	Y	Y
881029	881047	881046	SIGNAL RETIMING TO REDUCE EMISSIONS	2004	2005	N	Y	Y			Y	Y	Y	Y	Y	Y	Y
881030	080716	X50129	OZON ACTION DAYS- EPISODIC EMISSIONS CONTROL	2004	3/2004	N	Y	Y			Y	Y	Y	Y	Y	Y	Y
882172		M4040118	UPPER HARLEM SIGNALIZATION					K									
882194			PARK & RIDE LOT AT CENTRAL PARK AND NORTH W	2010	7/2012	N	Y	Y						Y	Y	Y	Y
882212			NEW ROCHELLE INTERMODAL TRANSPORATION CEN	2002	2004	N	Y	Y			Y	Y	Y	Y	Y	Y	Y
882218		M3021121	HAVERSTRAW-OSSINING FERRY	09/2000	4/2002	N	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y
882219			WEST SHORE EXPRESS BUS	1999	1999	C	Y	Y		COMPLETE	Y	Y	Y	Y	Y	Y	Y
882243	882244		CROTON FALLS SHUTTLE					K									
882244	882243		CROTON FALLS SHUTTLE	2001	2001	N	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y
882282	882277		YONKERS INTERMODAL CENTER-PARKING STRUCTU	2000	10/2002	N	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y
882300			TAPPAN ZEE EXPRESS	2001	2001	N	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y
882504	M4020306	M4020306	HARRIMAN STATION PARKING					K									
882507	M4040118		UPPER HARLEM DIV. SIGNALS					K									
882514		M4020212	BREWSTER NORTH PARKING EXPANSION					K									
894002	I-001		VARIABLE MESSAGE SIGNS IN I-87/I-287 CORRIDOR					K									
894004	810141-8		ADVANCED TRAVELER INFORMATION SYSTEM	6/2004	6/2006	N	Y	Y				Y	Y	Y	Y	Y	Y
8ATS06			ATMS/ATIS ROUTE 17	12/2017	12/2019	N	Y	Y						Y	Y	Y	Y
8TRM15			BEE-LINE DIESEL ENGINE RETROFIT PROGRAM	3/2004	9/2004	N	Y	Y			Y	Y	Y	Y	Y	Y	Y
ED12	875535	EN12	ROCKLAND COUNTY TO MANHATTAN HIGH SPEED FERRY PROJ					K									
EN124743		EN12-4743	63RD STREET/QUEENS BOULEVARD CONNECTION PF	1994	2002	N	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y
ESA	L092W		LIRR GRAND CENTRAL TERMINAL ACCESS (EAST SID	8/2001	4/2010	N	Y	Y					Y	Y	Y	Y	Y
RTP3200	RTP3200		LIRR:EAST SIDE ACCESS					K		SEE ESA1							
G40901G4			EAST SIDE ACCESS-FINAL DESIGN					K		SEE ESA							
G40901G5			EAST SIDE ACCESS-CONSTRUCTION					K		SEE ESA							
G40901G6			EAST SIDE ACCESS-OWNER CONTROL INSURANCE POLICY					K		SEE ESA							
G40901G7			ESA-PROGRAM/CONST MGT					K		SEE ESA							
G40901G8			ESA-REAL ESTATE					K		SEE ESA							
H19	872957		RAMPS CONNECT TAPPANZEE BRDG TOLLPLAZA TO INTER 8					K									
I001			INTELLIGENT TRANSPORTATION UPGRADE-2003	5/2003	12/2004	N	Y	Y			Y	Y	Y	Y	Y	Y	Y
L025K			FARMINGDALE PARKING	05/1999	2000	N	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y
L025L			NASSAU COUNTY PARKING PROGRAM	1999	2000	N	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y
L025Z			LONG ISLAND RAILROAD, BABYLON TRAIN STATION	08/1999	8/2001	N	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y
L027U			NASSAU COUNTY PARKING IMPROVEMENTS	DELETED	DELETED	D	Y	Y		DELETED							
L027V	4027V		SUFFOLK COUNTY STATION PARKING IMPROVEMENT	1999	2001	N	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y
L02PH			PARKING AND HUB PROJECTS	DELETED	DELETED	D	Y	Y		DELETED							
L03A0427			LIRR-TRACK CONNECTION, WEST SIDE TO PSNY TRA	2001	2003	E	Y	Y			Y	Y	Y	Y	Y	Y	Y
L301021J			DIESEL HAULED COACHES & CAB CAR PURCHASES	1997	1999	E	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y
L301031K			LIRR: REGULAR & DUAL MODE LOCOMOTIVES	1997	2000	E	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y
L302012A			LIRR: PLATFORM11,PENN STATION PLATFORM 11 EXT	1992	1996	E	Y	Y									
L302054N			SPEONK COMMUTER PARKING EXPANSION	2000	2001	N		Y		Y	Y	Y	Y	Y	Y	Y	Y
L302055E			MERRICK PARKING	1998	1998	N	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y
L302055H			BELLMORE PARKING	2001	2002	N	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y
L302055X			PORT JEFFERSON PARKING	2000	2001	N	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y
L30209CD			DEER PARK COMMUTER PARKING EXPANSION	2001	12/2001	C		Y		COMPLETE	Y	Y	Y	Y	Y	Y	Y
L40205C2			PARKING LOT REHABILITATION	2004	2005	N	Y	Y		NOT CODAB							
M02A0302			NORTHEND ACCESS, GRAND CENTRAL TERMINAL	1996	1999	E	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y
M02A0613			CORTLANDT STN REPLACES CRUGERS & MONTROSE	1994	1996	E	Y	Y									
M3021401	M4030303	NJTPSEED	SECAUCUS TRANSFER PROJECT	1994	2003	N	Y	Y			Y	Y	Y	Y	Y	Y	Y
M3030801	882502		MID HARLEM THIRD TRACK	UNK	10/2004	N	Y	Y			Y	Y	Y	Y	Y	Y	Y
M3070101			MNR: HARLEM LINE EXTENSION TO WASSAIC	1997	2000	N	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y
M4020305	875692		SLOATSBURG RR PARKING	DELETED	DELETED	D	Y	Y		DELETED							

Appendix 3

PIN	PIN2	PIN3	PROJ_NAME	LETD	DATE	COMPLET	QA	SEPTEMBER	APRIL	REMARK	F2002B	F2005T	F2007T	F2010P	F2020P	F2025P	F2030P
M4030303	882513		CONSTRUCT PASSING SIDINGS ON THE PASCACK VA	2003	2004	N	Y		Y			Y	Y	Y	Y	Y	Y
M4040118	882507	882172	MNR: UPPER HARLEM SIGNALIZATION		2004	2009	E	Y	Y					Y	Y	Y	Y
MHTNBRDG(FULL MANHATTAN BRIDGE UPGRADE		1986	7/2004	E	Y	Y		Y	Y	Y	Y	Y	Y	Y
N40905DG			LONG BEACH PARKING DECK		2001	2004	N		Y		Y	Y	Y	Y	Y	Y	Y
NJTPSEED			PENN STATION NY IMPROVEMENTS		1999	2002	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
NJTSECNE			NORTHEAST CORRIDOR HIGH LINE SIGNALING		1993	2003	E	Y	Y		Y	Y	Y	Y	Y	Y	Y
OL2970			PURCHASE 37 PARATRANSIT BUSES AND 10 EXPANS	9/2004	12/2005	N	Y		Y		Y	Y	Y	Y	Y	Y	Y
OL3200			HEMPSTEAD TRANSIT CENTER INTERMODAL FACILIT	12/2005	12/2007	N	Y		Y			Y	Y	Y	Y	Y	Y
PANYNJFF		PANYNJFF	JFK LRS ACCESS FROM JAMAICA AND HOWARD BEA	2000	12/2003	N	Y		Y		Y	Y	Y	Y	Y	Y	Y
RTP0100	875757		PARK AND RIDE RT 34 CAVALRY DRIVE				K										
RTP0200			PALISADES INTERSTATES PARKWAY ROUTE 302 (EXI	2018	1/2020	N	Y		Y	NOT CODAB							
RTP0400			RECONSTRUCTION OF WEST CLARKSTON ROAD	2019	7/2020	N	Y		Y	NOTCODABL							
RTP0500			RECONSTRUCTION OF MACNAMARA ROAD	2001	12/2001	C	Y		Y	NOT CODAY	Y	Y	Y	Y	Y	Y	Y
RTP0600			REPLACE STRUCTURALLY DEFICIENT BRIDGE	2007	9/2008	E	Y		Y	NOT CODAB							
RTP0700			REPLACEMENT OF GRASSY POINT ROAD BRIDGE	2009	7/2010	E	Y		Y	NOT CODAB							
RTP0800			REPLACEMENT OF WEST WASHINGTON AVE BRIDGE	2009	7/2010	N	Y		Y	NOT CODAB							
RTP0900			ADD LANE TO PASCACK ROAD		DELETED	DELETED	D										
RTP1000			RECONSTRUCTION OF EAST ECKERSON ROAD	2009	7/2010	N	Y		Y	NOT CODAB							
RTP1100			CONSTRUCTION OF OLD NYACK TURNPIKE EXTENSIO		DELETED	DELETED	D										
RTP1200			RECONSTRUCTION OF SANITORIUM ROAD	2019	7/2020	N	Y		Y	NOT CODAB							
RTP1300			REPLACEMENT OF KINGS HIGHWAY BRIDGE OVER SI	4/2006	7/2007	N	Y		Y	NOT CODAB							
RTP1400	875768		REPLACEMENT OF WILLIAM STREET BRIDGE	6/2007	9/2008	N	Y		Y	NOT CODAB							
RTP1700			YONKERS HARNEY ROAD BRIDGE	1999	4/2000	C	Y		Y	COMPLETEY	Y	Y	Y	Y	Y	Y	Y
RTP1800	875744		NORTH CASTLE- FROM HILLANDALE ROAD TO ROUTE		DELETED	DELETED	D										
RTP2000			PELHAM ROAD MAIN ST. TO NYC LINE	5/2002	10/2002	N	Y		Y		Y	Y	Y	Y	Y	Y	Y
RTP2100			YONKERS PARK AND RIDES	2019	7/2020	N	Y		Y	NOT CODAB							
RTP2200			YONKERS PARK AND RIDE @ SMRP/TOMPKINS	2019	2020	N	Y		Y	NOT CODAB							
RTP2300			GREENSBURG PARK AND RIDES	2010	2020	N	Y		Y	NOT CODAB							
RTP2500			MOUNT VERNON PARK AND RIDE	2010	2020	N	Y		Y	NOT CODAB							
RTP2600			PORTCHESTER PARK AND RIDE	2019	2020	N	Y		Y	NOT CODAB							
RTP2700			I-684 MEDIAN PARK AND RIDE		DELETED	DELETED	D		Y	DELETED							
RTP2900			WHITE PLAINS		DELETED	DELETED	D		Y	DELETED							
S93597			NYS HIGH SPEED RAIL AIR QUALITY INITIATIVE	1999	2007	N	Y		Y			Y	Y	Y	Y	Y	Y
SC5521	075676		CONSTRUCTION OF RIGHT TURN LANES AT CR3 WEL	10/2004	9/2005	N	Y		Y		Y	Y	Y	Y	Y	Y	Y
SC5534			IMPROVEMENTS TO CR80 MONTAUK HIGHWAY BETW	4/2005	4/2006	N	Y		Y			Y	Y	Y	Y	Y	Y
SC5539			CR7 WICKS ROAD CORRIDOR STUDY & IMPROVEMEN	5/2005	12/2006	N	Y		Y			Y	Y	Y	Y	Y	Y
TUXEDO			RH TUXEDO DEVELOPMENT	2013	2017	N	Y		Y	NOT CODAB							
X02421	X02427	X02422	ROUTE 9A RECONSTRUCTION, SEGMENT 4	1996	12/1998	C	Y		Y	COMPLETEY	Y	Y	Y	Y	Y	Y	Y
X02422			ROUTE 9A RECONSTRUCTION (STATE ST. TO BATTE	5/2000	10/2001	C	Y		Y	COMPLETEY	Y	Y	Y	Y	Y	Y	Y
X02423			ROUTE 9A RECONSTRUCTION, SEGMENT 2	1997	6/2003	C	Y		Y	COMPLETED							
X02424			ROUTE 9A RECONSTRUCTION, SEGMENT 3	1998	5/2002	C	Y		Y	COMPLETEY	Y	Y	Y	Y	Y	Y	Y
X02425			ROUTE 9A RECONSTRUCTION, SEGMENT 5	1997	12/2001	C	Y		Y	COMPLETEY	Y	Y	Y	Y	Y	Y	Y
X02426			ROUTE 9A RECONSTRUCTION, SEGMENT 6	1998	6/2002	C	Y		Y	COMPLETEY	Y	Y	Y	Y	Y	Y	Y
X02427			ROUTE 9A RECONSTRUCTION, SEGMENT 7	1997	8/2001	C	Y		Y	COMPLETEY	Y	Y	Y	Y	Y	Y	Y
X02439			ROUTE 9A ITS (CHAMBER - 59TH ST)	1/2001	7/2004	N	Y		Y		Y	Y	Y	Y	Y	Y	Y
X02706			EDGEWATER ROAD DEDICATED TRUCK ROUTE		DELETED	DELETED	D		Y								
X03405			LONG ISLAND EXPWY/CLEARVIEW EXPWY INTERCHA	2000	9/2003	C	Y		Y		Y	Y	Y	Y	Y	Y	Y
X05150			RECONFIGURATION OF GRAND CENTRAL PARKWAY (1998	10/1999	C	Y		Y	COMPLETEY	Y	Y	Y	Y	Y	Y	Y
X07122			FDR DRIVE REHAB (56TH TO 63RD ST OVERPASS)	2000	2003	N	Y		Y		Y	Y	Y	Y	Y	Y	Y
X09619			WEST SHORE EXPRESSWAY ACCESS IMPROVEMENT	1/2001	1/2002	C	Y		Y	COMPLETEY	Y	Y	Y	Y	Y	Y	Y
X22867	X22882	022867	LIE BR'S & HWY REHAB (EXIT 29-32)	5/2000	11/2004	N	Y		Y		Y	Y	Y	Y	Y	Y	Y
X22882	X22867	CONSOLID	I-495 LONG ISLAND EXPRESSWAY				K										
X50002			RED HOOK CONTAINER BARGE	1997	1999	N	Y		Y		Y	Y	Y	Y	Y	Y	Y
X50005			TAXI STAND DISPATCHING PROGRAM	9/2000	7/2004	N	Y		Y		Y	Y	Y	Y	Y	Y	Y
X50007	X50008		CITY-WIDE BUS LANE IMPROVEMENTS	1993	2003	N	Y		Y		Y	Y	Y	Y	Y	Y	Y
X50008	X50007		FIFTH AVENUE DUAL BUS LANE	1993	1995	C	Y		Y								
X50009			QUEENSBORO BRIDGE FIBER OPTICS CABLE AND SU	07/2002	03/2004	N	Y		Y		Y	Y	Y	Y	Y	Y	Y

Appendix 3

PIN	PIN2	PIN3	PROJ_NAME	LETD	DATE	COMPLET	QA	SEPTEMBER	APRIL	REMARK	F2002B	F2005T	F2007T	F2010P	F2020P	F2025P	F2030P
X50052			STATEN ISLAND RAILROAD	1997	5/1999	C	Y	Y		COMPLETE	Y	Y	Y	Y	Y	Y	Y
X50053			HARLEM RIVER YARD	12/1997	1998	C	Y	Y		COMPLETE	Y	Y	Y	Y	Y	Y	Y
X50062			COMMUTER LINK	1999	2002	N	Y	Y			Y	Y	Y	Y	Y	Y	Y
X50063	X75644	X50087	NYC ALTERNATE FUELS	1994	2004	N	Y	Y			Y	Y	Y	Y	Y	Y	Y
X50064	X50087		ALT FUELS EQUIP LEASE	1998	3/2005	N	Y	Y			Y	Y	Y	Y	Y	Y	Y
X50065			MARINE TRANSPORT - RECYCLE BARGE	12/1998	3/1999	N	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y
X50084	X50015-1		NYC CNG TAXI PROGRAM 2ND PHASE	1999	6/2005	N	Y	Y			Y	Y	Y	Y	Y	Y	Y
X50086	X50064		PRIVATE FLEET ALTERNATE FUEL ASSISTANCE PRO	1999	6/2005	N	Y	Y			Y	Y	Y	Y	Y	Y	Y
X50087	X75644	X50063	FLEETWIDE EMISSION REDUCTION PROGRAM	1999	6/2005	N	Y	Y			Y	Y	Y	Y	Y	Y	Y
X50093	X50112		DEPLOYMENT OF REALTIME TRAFFIC ADAPTIVE SYS	11/1999	2006	N	Y	Y				Y	Y	Y	Y	Y	Y
X50112	X50093		DEPLOYMENT OF REALTIME TRAFFIC ADAPTIVE SYS	11/1999	2006	N	Y	Y				Y	Y	Y	Y	Y	Y
X72037			MAJOR DEEGAN EXPWY: WEST FORDHAM RD SAFET	8/2004	5/2005	N	Y	Y			Y	Y	Y	Y	Y	Y	Y
X72684	X72690	X72691	TRAFFIC MANAGEMENT SYSTEM FOR THE I-95 CORR	10/1997	2001	N	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y
X73023			BQE RECONSTRUCTION (B'WAY -GCP)	1/2000	10/2004	N	Y	Y			Y	Y	Y	Y	Y	Y	Y
X73039	RTP3000		BRUCKNER/SHERIDAN EXPRESSWAY INTERCHANGE	04/2004	2015	E	Y	Y		EIS NOT C							
X73053			BQE RECONSTRUCTION (B'WAY - QNS BLVD)	10/21/04	12/2008	N	Y	Y					Y	Y	Y	Y	Y
X73068	X73092	X73093	STATEN ISLAND EXPWY PAVEMENT RESURFACING & REHABIL					K									
X73079			I-278 GOWANUS EXPRESSWAY	UNK	UNK	E				NOT CODAB							
X73080	DELETED		I-278 GOWANUS EXPRESSWAY	2000	2012	D	Y	Y		DELETED							
X73081	DELETED		I-278 GOWANUS EXPRESSWAY	2001	2013	D	Y	Y		DELETED							
X73085			I-278 GOWANUS EXPRESSWAY	6/1999	4/2000	C	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y
X73088			I-278 GOWANUS EXPRESSWAY	6/2000	2/2003	C	Y	Y			Y	Y	Y	Y	Y	Y	Y
X73089			I-278 GOWANAS EXPRESSWAY	7/2002	6/2004	N	Y	Y		SAME AS 7	Y	Y	Y	Y	Y	Y	Y
X73092	X73093		STATEN ISLAND EXPRESSWAY TSM IMPROVEMENTS					K									
X73093	X73092		STATEN ISLAND EXPWY. BRIDGE, HIGHWAY, AND TSM	4/2004	6/2005	N	Y	Y			Y	Y	Y	Y	Y	Y	Y
X73099	X73105		SEE X73105					K									
X73105A	X73105B	X73105C	STATEN ISLAND SMALL-SCALE PARK & RIDE TSM PRC	2006	2002	N	Y	Y		X73105C D Y	Y	Y	Y	Y	Y	Y	Y
X73057			REHABILITATION OF THE BQE (I-278) FROM FLUSHING	12/2004	2008	N		Y					Y	Y	Y	Y	Y
XHPTRUCK			HUNT POINT TRUCK ROUTE	UNK	2004	N		Y			Y	Y	Y	Y	Y	Y	Y
X153ST			EAST 153RD STREET BRIDGE	UNK	2008	N		Y					Y	Y	Y	Y	Y
XGCPTRUCK			TRUCKS ON GCP TO BQE	UNK	2004	N		Y			Y	Y	Y	Y	Y	Y	Y
X10107			SAFETY IMPROVEMENTS ON HUTCHINSON RIVER PAI	2010	2012	N		Y						Y	Y	Y	Y
839058			ROUTE 6/6N CORRIDOR PLANNING STUDY	UNK	UNK	N		Y									
X75764	84100BKBR		BELT PARKWAY BRIDGE OVER OCEAN PARKWAY	2002	2004	N		Y			Y	Y	Y	Y	Y	Y	Y
004218			NY25/NY110 INTERSECTION IMPROVEMENTS	2006	2007	N		Y				Y	Y	Y	Y	Y	Y
075822			OLD COUNTY ROAD, GARDEN CITY AND MINEOLA	2005	2006	N		Y				Y	Y	Y	Y	Y	Y
051723			WANTAGH PARKWAY BIKEWAY EXTENSION	2007	2008	N		Y					Y	Y	Y	Y	Y
X75759			RECONSTRUCTION OF 145TH STREET BRIDGE OVER	2004	2007	N		Y					Y	Y	Y	Y	Y
8TTOR91			TOR # 91 EXPRESS	UNK	2002	N		Y		Y	Y	Y	Y	Y	Y	Y	Y
XTHRU			THRU STREETS PROGRAM	UNK	2002	N		Y		Y	Y	Y	Y	Y	Y	Y	Y
802137			ROUTE 52 @ FARMERS MILL RD. TOWN OF KENT	2002	2004	N		Y			Y	Y	Y	Y	Y	Y	Y
X02162			REPLACEMENT OF BELT PARKWAY BRIDGE OVER PA	2007	2011	N		Y						Y	Y	Y	Y
X02152			BELT PARKWAY OVER MILL BASIN	2007	2012	N		Y						Y	Y	Y	Y
X02154			BELT PARKWAY OVER GERRITSEN INLET	2007	2011	N		Y						Y	Y	Y	Y
X02168			LEIF ERICSON DRIVE (BELT PARKWAY) OVER NOSTR.	2008	2011	N		Y						Y	Y	Y	Y
X80318			SHORE (BELT) PARKWAY OVER ROCKAWAY PARKWA	2008	2011	N		Y						Y	Y	Y	Y
X02153			SHORE (BELT) PARKWAY OVER FRESH CREEK BASIN	2007	2010	N		Y						Y	Y	Y	Y
895005	872956		WESTCHESTER COUNTY SHUTTLE NETWORK	UNK	2003	N		Y			Y	Y	Y	Y	Y	Y	Y
875460			NORTH MAIN STREET RECONSTRUCTION	1999	2008	N		Y					Y	Y	Y	Y	Y
XNERAMP			I-95 NEW ENGLAND THRUWAY INTERCHANGE 11, BAF	2006	2006	N		Y				Y	Y	Y	Y	Y	Y
X75749			REPLACEMENT OF THE THGIRD AVE. BRIDGE	2001	2005	N		Y			Y	Y	Y	Y	Y	Y	Y
X75700			REPLACEMENT OF WILLIS AVE. BRIDGE OVER THE H	2006	2011	N		Y						Y	Y	Y	Y
875689			STONELEIGH AVE. @ DREWVULLE RD IMPROVEMENT	2006	2008	E		Y					Y	Y	Y	Y	Y
875788			SINGLE LANE TUNNEL REPLACEMENT, VILLAGE OF H	2008	2010	N		Y					Y	Y	Y	Y	Y
800400			BEAR MOUNTAIN PARKWAY RECONSTRUCTION	2008	2012	E		Y		STUDY							
033912			LONG ISLAND TRUCK-RAIL INTERMODAL FACILITY	2008	2010	N		Y					Y	Y	Y	Y	Y
SC5529			CR58, OLD COUNTY ROAD, I495 TO CR105	UNK	2013	N		Y						Y	Y	Y	Y

Appendix 3

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X72681			I95 CORRIDOR, ALEXANDER HAMILTON BRIDGE	2006	2009	N			Y					Y	Y	Y	Y
OL3160			MTA LIRR/ LI BUS ITS INTERMODAL COMMUNICATION	2006	2008	N			Y					Y	Y	Y	Y
OL3150			MTA LONG ISLAND BUS MARKETING PROGRAM	2005	2006	N			Y				Y	Y	Y	Y	Y
051731			ITS SYSTEM FOR WANTAGH STATE PARKWAY	2007	2009	N			Y				Y	Y	Y	Y	Y
005028			SEAFORD OYSTER BAY EXPRESSWAY ITS	2009	2011	N			Y					Y	Y	Y	Y
080676			OPERATION OF THE INFORM TRAFFIC MANAGEMENT	UNK	2005	N			Y		Y		Y	Y	Y	Y	Y
052326			ITS SYSTEM FOR MEADOWBROOK STATE PARKWAY	2005	2007	N			Y			Y	Y	Y	Y	Y	Y
080731			ITS DESIGN SERVICES	UNK	2010	N			Y				Y	Y	Y	Y	Y
051650			NORTHERN STATE PARKWAY INFORMATION UPGRAD	2004	2006	N			Y			Y	Y	Y	Y	Y	Y
080556			HIGHWAY EMERGENCY LOCAL PATROL	UNK	2005	N			Y		Y		Y	Y	Y	Y	Y
ERSKINE			ERSKINE STREET INTERCHANGE	2001	2002	N			Y	Y	Y	Y	Y	Y	Y	Y	Y
075736			RECONSTRUCTION OF COUNTY ROAD 39	2007	2009	N			Y				Y	Y	Y	Y	Y
075818	OT1812		INTERSECTION IMPROVEMENTS AT CR 11, PULASKI F	2004	2005	N			Y		Y	Y	Y	Y	Y	Y	Y
075806			MARCUS AVE/DENTON AVE. INTERSECTION IMPROVE	2004	2005	N			Y		Y	Y	Y	Y	Y	Y	Y
804094			ROUTE 9 RECONSTRUCTION	2007	2008	N			Y				Y	Y	Y	Y	Y
850207			ROUTE 303 AND NJ LINE ROUTE 59	2008	2012	E			Y					Y	Y	Y	Y
080655			SUFFILK COUNTY COMMUTER ALTERNATIVE	UNK	UNK	D			Y								
080372			TDM PROGRAM NYSDOT	UNK	UNK	N			Y								
080634			NASSAU COUNTY COMMUTER ALTERNATIVE	UNK	UNK	N			Y								
OT1676	080395		BICYCLE LOCKER PROGRAM	2005	2007	N			Y			Y	Y	Y	Y	Y	Y
007712			NY 111 SIDEWALK CONSTRUCTION	2005	2005	N			Y		Y	Y	Y	Y	Y	Y	Y
051729			WANTAGH PARKWAY BIKEWAY RECONSTRUCTION	2005	2006	N			Y			Y	Y	Y	Y	Y	Y
080395	OT1676		TDM RIDESHARE GRANTS	2001	ONGO	N			Y								
080553			TDM OUTREACH AND EDUCATION NYSDOT	2001	ONGO	N			Y								
080563			SOUTH FORK BIKEWAY	2007	2007	N			Y			Y	Y	Y	Y	Y	Y
001755	000611	051723	ROBERT MOSES CAUSEWAY BIKEWAY	2008	2009	N			Y				Y	Y	Y	Y	Y
000611	001755	051729	OCEAN PARKWAY BIKEWAY	2005	2006	N			Y			Y	Y	Y	Y	Y	Y
053457			BETHPAGE PKWAY BIKEWAY	2005	2006	N			Y			Y	Y	Y	Y	Y	Y
090567	080567		INTERSECTION IMPROVEMENTS	2005	2007	N			Y			Y	Y	Y	Y	Y	Y
001141121			NY 112 INTERSECTION IMPROVEMENTS	2006	2008	N			Y				Y	Y	Y	Y	Y
080567			INTERSECTION IMPROVEMENTS	2005	2007	N			Y			Y	Y	Y	Y	Y	Y
882157			DUTCHESS PUTNAM WHITE PLAINS EXPRESS BUS	2003	ONGO	N			Y								
882185			STAMFORD- WHITE PLAINS EXPRESS BUS	2004	ONGO	N			Y								
882161			ORANGE TO WESTCHESTER LINK	2004	2004	N			Y		Y	Y	Y	Y	Y	Y	Y
882264			HART SHUTTLES	UNK	ONGO	N			Y								
XHWM738			HWM738 EAST & WEST HOUSTON STREET	2005	2007	N			Y			Y	Y	Y	Y	Y	Y
XHWRPO54			HYLAN BOULEVARD RECONSTRUCTION	2006	2006	N			Y			Y	Y	Y	Y	Y	Y
XHWK700A			HWK700A COLUMBIA STREET	2005	2007	N			Y			Y	Y	Y	Y	Y	Y
8TSPUD			TSP: PUDDING STREET GRADE SEPARATION	2013	2014	N			Y					Y	Y	Y	Y
XONEWAY			ONE WAY STREET CONVERSION	UNK	2005	N			Y		Y	Y	Y	Y	Y	Y	Y
882038			METROPOOL RIDESHARE PROGRAM	UNK	ONG	N			Y								
880690			METRO-NORTH CONNECTING SERVICES	2003	ONGO	N			Y								
880688			COMMUTE ALTERNATIVES	2004	ONGO	N			Y								
X50057	X50013	X50098	CONTINUATION OF BIKE NETWORK	1997	UNK	N			Y								
X50094			LOCAL STREET NETWORK AND INCIDENT MANAGEMEN	2005	2006	N			Y			Y	Y	Y	Y	Y	Y
X50092			ADVANCED TRAVELER INFORMATION SERVICE (ATID:2005	2005	2006	N			Y			Y	Y	Y	Y	Y	Y
880689			ROCKLAND COUNTY TRAVEL DEMAND MANAGEMENT	UNK	ONGOING	N			Y								
8TFDR	882303		FDR DRIVE PARK AND RIDE	UNK	2004	N			Y		Y	Y	Y	Y	Y	Y	Y
M4020314			BREWSTER PARKING EXPANSION	2005	2008	N			Y				Y	Y	Y	Y	Y
MPATT			PATTERSON PARKING EXPANSION	2003	2003	N			Y		Y	Y	Y	Y	Y	Y	Y
MTNWP			NORTH WHITE PLAINS PARKING STRUCTURE	2010	2012	N			Y				Y	Y	Y	Y	Y
MTCORT			CORTLANDT PARKING EXPANSION	2010	2012	N			Y				Y	Y	Y	Y	Y
MTPCHEST			PORT CHESTER PARKING GARAGE	2004	2004	N			Y		Y	Y	Y	Y	Y	Y	Y
X50125			STATEN ISLAND RAILROAD REACTIVIATION	2004	2005	N			Y		Y	Y	Y	Y	Y	Y	Y
X82300			IBC JAMAICA BAKERY	2005	2005	N			Y		Y	Y	Y	Y	Y	Y	Y
X34919			KOREAN WAR VETERAN PARKWAY RAMP TERMINUS	2007	2009	N			Y				Y	Y	Y	Y	Y
X50077			COMMUNITY TRANSIT PROJECT	2003	2005	N			Y		Y	Y	Y	Y	Y	Y	Y

Appendix 3

PIN	PIN2	PIN3	PROJ_NAME	LETD	DATE	COMPLET	QA	SEPTEMBER	APRIL	REMARK	F2002B	F2005T	F2007T	F2010P	F2020P	F2025P	F2030P
075778			TRAFFIC SIGNAL EXPANSION	UNK	2007	N		Y				Y	Y	Y	Y	Y	Y
875488			WILMOT RD RECONSTRUCTION	2003	2005	N		Y			Y	Y	Y	Y	Y	Y	Y
X50120			BATTERY PARK BIKEWAY	2006	2007	N		Y				Y	Y	Y	Y	Y	Y
875480			KIMBAL & MCLEAN AVE. TRAFFIC SIGNALS	UNK	2005	N		Y			Y	Y	Y	Y	Y	Y	Y
GOETHALS			GOETHALS BRIDGE MODERNIZATION PROGRAM	2007	2011	N		Y						Y	Y	Y	Y
XTRVIS			STATEN ISLAND RAILROAD REACTIVATION	2004	2005	N		Y			Y	Y	Y	Y	Y	Y	Y
OLFERRY3			PORT JEFFERSON, NY BRIDGEPRT, CT	UNK	2000	N		Y		Y	Y	Y	Y	Y	Y	Y	Y
OLFERRY2			ORIENT POINT, NY- NEW ENGLAND, CT	UNK	2000	N		Y		Y	Y	Y	Y	Y	Y	Y	Y
OLFERRY1			MONTAUK, NY - NEW LONDON, CT	UNK	2000	N		Y		Y	Y	Y	Y	Y	Y	Y	Y
8TRROUTE59			ROUTE 59 SIGNAL OPTIMIZATION	UNK	2006	N		Y			Y	Y	Y	Y	Y	Y	Y
OT1823			SYSTEM WIDE 2005 TRAFFIC SIGNAL TIMING IMPROV	UNK	2005	N		Y			Y	Y	Y	Y	Y	Y	Y
OT1824			SYSTEM WIDE 2006 TRAFFIC SIGNAL TIMING IMPROV	UNK	2006	N		Y				Y	Y	Y	Y	Y	Y
OT1822			SYSTEM WIDE 2004 TRAFFIC SIGNAL TIMING IMPROV	UNK	2005	N		Y			Y	Y	Y	Y	Y	Y	Y
053459			SOUTHERN STATE PARKWAY ITS SYSTEM	1998	2002	N		Y		Y	Y	Y	Y	Y	Y	Y	Y
XBP13			DOWNTOWN BROOKLYN PEDESTRIAN IMPROVEMEN	2005	2008	N		Y					Y	Y	Y	Y	Y
XGM06	IT1306		HUNTS POINT TRUCK SIGNAL	2004	2006	N		Y				Y	Y	Y	Y	Y	Y
XTR01			BUS REPLACEMENT	2007	2008	N		Y					Y	Y	Y	Y	Y
XGM03			RAIL FREIGHT IMPROVEMENTS IN QUEENS COUNTY	UNK	2010	N		Y					Y	Y	Y	Y	Y
XBP0104			PEDESTRIAN NETWORK DEVELOPMENT IV	2006	2009	N		Y					Y	Y	Y	Y	Y
XBP02			WALK TO SCHOOL PROGRAM III	2005	2010	N		Y					Y	Y	Y	Y	Y
XBP0309	X50057		BICYCLE NETWORK DEVELOPMENT	2005	UNK	N		Y									
XBP0506			HUDSON RIVER VALLEY GREENWAY	2006	2007	N		Y				Y	Y	Y	Y	Y	Y
XBP08			REGATTA PARK/ HARLEM RIVER GREENWAY I	2005	2007	N		Y				Y	Y	Y	Y	Y	Y
XBP15			LIRR RAIL TO RAIL QUEENS	2006	2012	N		Y						Y	Y	Y	Y
XBP17			GREENWAY NETWORK DEVELOPMENT V	2007	2009	N		Y					Y	Y	Y	Y	Y
XBP18			THE HIGH LINE INTERMODAL PEDESTRIAN FACILITY	2005	2008	N		Y					Y	Y	Y	Y	Y
XBP20			QUEENS EAST RIVER- NORTH SHORE GREENWAY I	2006	2006	N		Y				Y	Y	Y	Y	Y	Y
XBP23			RANDALLS ISLAND PATHWAY CONNECTIONS	2004	2006	N		Y				Y	Y	Y	Y	Y	Y
XGM01			TRANSPORTING NEW YORK CITY RECYCLABLES	UNK	2009	N		Y					Y	Y	Y	Y	Y
X82300	GM02		IBC JAMAICA BAKERY	2005	2009	N		Y					Y	Y	Y	Y	Y
XMISC01			CITYWIDE CORRIDOR CONGESTION REDUCTION PRC	2005	2010	N		Y					Y	Y	Y	Y	Y
XMISC03			ASTHMA FREE SCHOOL ZONE	2005	2008	N		Y					Y	Y	Y	Y	Y
XMISC04			DOWNTOWN BROOKLYN MOBILITY MANAGEMENT ST	2005	2009	N		Y					Y	Y	Y	Y	Y
XMISC05			COMMUTER LINK/REGIONAL COMMUTER CHOICE	2007	2010	N		Y					Y	Y	Y	Y	Y
XMISC06			QUEENS PLAZA ROADWAY REBUILDING	UNK	2009	N		Y					Y	Y	Y	Y	Y
XIT01			CONSTRUCTION OF FIBER OPTIC CABLE ALONG KOR	2000	2010	N		Y					Y	Y	Y	Y	Y
XIT02			CONSTRUCTION OF F/O LINES	2006	2009	N		Y					Y	Y	Y	Y	Y
XIT05			CONSTRUCTION OF F/O LINES ALONG HENRY HUDSC	2007	2009	N		Y					Y	Y	Y	Y	Y
XIT06			CONSTRUCTION OF F/O LINKS FOR BELT PKWY	2006	2010	N		Y					Y	Y	Y	Y	Y
XIT09			TRANSIT ADVISOR/COMMUTER CHOICE INTEGRATIO	2004	2007	N		Y				Y	Y	Y	Y	Y	Y
X80602	XIT10/17		INTEGRATED INCIDENT MANAGEMENT SYSTEM	2004	2006	N		Y				Y	Y	Y	Y	Y	Y
XIT14			ICM HELP ON BELT SYSTEM	2006	2010	N		Y					Y	Y	Y	Y	Y
XIT19			IMPLEMENTATION OF ITS ALONG THE NEW ENGLAND	2007	2009	N		Y					Y	Y	Y	Y	Y
IT2006			EARLY ACTION IMPLIMENTATION OF ITS ON CROSS I	2006	2008	N		Y					Y	Y	Y	Y	Y
XTR02			59TH ST./COLUMBUS CIRCLE STATION IMPROVEMEN	2005	2009	N		Y					Y	Y	Y	Y	Y
XTR04			IMPROVESERVICE MANAGEMENT ON THE B-DIVISION	2005	2008	N		Y					Y	Y	Y	Y	Y
XTR05			UNION TPKE STATION/ INTERMODAL IMPROVEMENTS	2004	2010	N		Y					Y	Y	Y	Y	Y
XTR06			OPERATIONAL IMPROVEMENTS ON #7 LINE	2006	2009	N		Y					Y	Y	Y	Y	Y
XTR07			PURCHASE NEW SUBWAY CARS: B DIVISION	2007	2010	N		Y					Y	Y	Y	Y	Y
XTR08			71 ST. AVENUE STATION IMPROVEMENTS	2007	2011	N		Y					Y	Y	Y	Y	Y
XTR09			72ND STREET STATION	2007	2011	N		Y					Y	Y	Y	Y	Y
XTR10			86TH STREET STATION @ SECOND AVE. SUBWAY	2007	2011	N		Y					Y	Y	Y	Y	Y
XTR11	G40902	G40903	SECOND AVE SUBWAY , 96TH STREET STATION	2007	2011	N		Y					Y	Y	Y	Y	Y
XTR12			PURCHASE NEW SUBWAY CARS: B DIVISION	2003	2011	N		Y					Y	Y	Y	Y	Y
XTR13			96TH STREET/ BWAY SUBWAY STATION INTERMODAL	2008	2012	N		Y					Y	Y	Y	Y	Y
XTR14			EXPANSION OF EAST NEW YORK BUS DEPOT	2008	2010	N		Y					Y	Y	Y	Y	Y
XTR15			STATEN ISLAND EXPWAY BUS LANE EXTENSION	2005	2010	N		Y					Y	Y	Y	Y	Y

Appendix 3

PIN	PIN2	PIN3	PROJ_NAME	LETDATE	COMPLET	Q3	SEPTEMBER	APRIL	REMARK	F2002B	F2005T	F2007T	F2010P	F2020P	F2025P	F2030P
XTR16			OPERATIONS: INCREASE SERVICE ON #4 AND #5 TRA	2006	2009	N		Y					Y	Y	Y	Y
XTR17			MYRTLE/ WYCOFF STATION- INTERMODAL IMPROVEM	UNK	2006	N		Y			Y	Y	Y	Y	Y	Y
XTR18			SYSTEM WIDE BUS SERVICE MANAGEMENT AND CUS	2004	2008	N		Y				Y	Y	Y	Y	Y
XTR19			CONSTRUCTION NEW PASSENGER TRANSFER: JAY - 2004	2004	2010	N		Y				Y	Y	Y	Y	Y
803042			ROUTE 59 AT AIRMONT ROAD	2008	2009	N		Y				Y	Y	Y	Y	Y
875903			PASCACK ROAD RECONSTRUCTION	2010	2012	N		Y					Y	Y	Y	Y
839096			ROUTE 6 AND WESTBROOK DR. INTERCHANGE	2007	2008	N		Y				Y	Y	Y	Y	Y
875898			SUFFERN LANE HAMMOND ROAD	2008	2009	N		Y				Y	Y	Y	Y	Y
875907			PASCACK ROAD LAWRENCE STREET	2007	2007	N		Y			Y	Y	Y	Y	Y	Y
875901			NORTH AVE TRAFFIC SIGNAL REPLACEMENT	2008	2009	N		Y				Y	Y	Y	Y	Y
875902			WEBSTER AVE. TRAFFIC SIGNALS	UNK	UNK	N		Y								
803041			ROUTE 59 FROM ROUTE 303 TO BROOME BOULEVARI	2008	2009	N		Y				Y	Y	Y	Y	Y
875900			MAIN STREET AND HUGUENOT STREET TRAFFIC SIGI	2008	2010	N		Y				Y	Y	Y	Y	Y
875899			PELHAM ROAD TRAFFIC SIGNAL	2008	2009	N		Y				Y	Y	Y	Y	Y
850220			ROUTE 303 AT LAKE ROAD, VALLEY COTTAGE	2008	2009	N		Y				Y	Y	Y	Y	Y
809347			PALISADES INTERSTATE PEDESTRIAN/BIKE PATH ST,	2005	2005	N		Y		Y	Y	Y	Y	Y	Y	Y
MBEACON			BEACON PARKING EXPANSION	UNK	2006	N		Y			Y	Y	Y	Y	Y	Y
MTUXEDO			TUXEDO PARKING EXPANSION	UNK	2003	N		Y		Y	Y	Y	Y	Y	Y	Y
075778			TRAFFIC SIGNAL EXPANSION	UNK	2007	N		Y			Y	Y	Y	Y	Y	Y
856134			ROUTE 35/202 PINE GROVE COURT/STONE STREET	2008	2009	N		Y				Y	Y	Y	Y	Y
875906			MAHOPAC FALLS TRAILWAY	2007	2007	N		Y			Y	Y	Y	Y	Y	Y
875905	875580		PUTNAM BIKEWAY IV	2007	2007	N		Y			Y	Y	Y	Y	Y	Y
875897	875756		SOUTH COUNTY TRAILWAY PHASE 5	UNK	2007	N		Y			Y	Y	Y	Y	Y	Y
875896			MONSEY GLEN BIKE AND PEDESTRIAN TRAIL	2007	2009	N		Y				Y	Y	Y	Y	Y
875895	875523		IMPROVED PEDESTRIAN ACCESS TO NEW CITY BUSII	2007	2009	E		Y				Y	Y	Y	Y	Y
875904			SBR 9 ROCKLAND LAKE RIVER TRAIL	UNK	2007	E		Y			Y	Y	Y	Y	Y	Y
850219			ROUTE 303 @ ERIC STREET	2008	2009	N		Y				Y	Y	Y	Y	Y
X80602			COORDINATED INCIDENT MANAGEMENT ENHANCEME	UNK	2003	N		Y		Y	Y	Y	Y	Y	Y	Y
X80413			THE INTEGRATED INCIDENT MANAGEMENT SYSTEM	UNK	2005	N		Y		Y	Y	Y	Y	Y	Y	Y
X80580			HIGHWAY EMERGENCY LOCAL PATROL (HELP) PROJ	2006	2008	N		Y				Y	Y	Y	Y	Y
X80579			HIGHWAY EMERGENCY LOCAL PATROL (HELP) PROJ	2004	2006	N		Y			Y	Y	Y	Y	Y	Y
005895			SUNRISE HIGHWAY (NT27) SAFETY	2006	2007	N		Y			Y	Y	Y	Y	Y	Y
H2070			YONKERS TOLL BARRIER RETROFIT WITH HIGHER HI	2008	2009	N		Y				Y	Y	Y	Y	Y
SI015220			SIRTOA: NEW ARTHURS KILL STATION	2007	2009	N		Y				Y	Y	Y	Y	Y
8TRIDGE			RIDGE HILL VILLAGE ACCESS ROADS	UNK	2007	N		Y				Y	Y	Y	Y	Y
881046	881029	881047	ROCKLAND COUNTY SIGNAL RETIMING	UNK	2006	N		Y			Y	Y	Y	Y	Y	Y
881047	881046	881029	WESTCHESTER COUNTY SIGNAL RETIMING, PART 2	UNK	2006	N		Y			Y	Y	Y	Y	Y	Y
0T1849			0T 1849- NY 347 SHORT TERM IMPROVEMENT	2005	2007	N		Y				Y	Y	Y	Y	Y
881049			HELP SYSTEM EXPANSION	2006	2010	N		Y				Y	Y	Y	Y	Y
075752	075775	075815	DESIGN OF GLEN COVE COMMUTER FERRY TERMINA	2003	2005	E		Y	UNK	Y	Y	Y	Y	Y	Y	Y
G4120101	G4120102	G4120105	FULTON STREET TRANSIT CENTER	2004	2008	N		Y				Y	Y	Y	Y	Y
G4120202			SOUTH TERMINAL STATION	2004	2008	N		Y			Y	Y	Y	Y	Y	Y
X80583	X80615		BRONX AND NORTHERN PKWY ITS	2005	2007	N		Y				Y	Y	Y	Y	Y
X80615	X80583		BRONX AND NORTHERN PKWY ITS	2005	2007	N		Y				Y	Y	Y	Y	Y

Appendix 4-A1

NYMTC BPM - Highway Assignment Calibration

Comparison of traffic assignments flows with observed traffic counts at screenline locations

Mean Weekday Count / Volume

County	Functional Class Group	Scrn. Network Links	SCREEN LINES (Mean Count)	BPM Mean Volume	Diff. BPM - Est.	% Diff. BPM from Est.	% RMSE BPM from Est.
1. Manhattan	1,11,12	41	59,373	57,495	(1,878)	-3%	21%
	2,6,14,16	207	29,145	25,743	(3,401)	-12%	52%
	County Total	260	33,052	30,051	(3,001)	-9%	45%
2. Queens	1,11,12	68	61,256	63,051	1,795	3%	33%
	2,6,14,16	211	19,844	18,539	(1,304)	-7%	59%
	County Total	281	29,718	29,185	(533)	-2%	48%
3. Bronx	1,11,12	62	52,918	47,237	(5,682)	-11%	39%
	2,6,14,16	130	17,457	15,559	(1,898)	-11%	59%
	County Total	231	25,319	22,303	(3,016)	-12%	54%
4. Brooklyn	1,11,12	38	62,125	58,107	(4,018)	-6%	28%
	2,6,14,16	252	18,471	17,359	(1,113)	-6%	62%
	County Total	301	23,703	22,159	(1,544)	-7%	52%
5. Staten Island	1,11,12	19	43,099	42,347	(752)	-2%	32%
	2,6,14,16	59	19,111	14,949	(4,162)	-22%	48%
	County Total	79	24,868	21,573	(3,295)	-13%	42%
6. Nassau	1,11,12	43	60,772	62,750	1,978	3%	20%
	2,6,14,16	165	18,837	20,489	1,653	9%	55%
	County Total	237	25,127	26,946	1,819	7%	42%
7. Suffolk	1,11,12	31	31,056	38,756	7,701	25%	68%
	2,6,14,16	125	14,235	14,301	65	0%	60%
	County Total	179	16,427	17,444	1,016	6%	71%
8. Westchester	1,11,12	71	36,050	38,362	2,311	6%	28%
	2,6,14,16	138	12,209	8,204	(4,005)	-33%	67%
	County Total	222	19,693	17,936	(1,757)	-9%	44%
9. Rockland	1,11,12	24	38,414	42,880	4,466	12%	23%
	2,6,14,16	86	13,862	9,510	(4,352)	-31%	90%
	County Total	114	18,570	16,492	(2,077)	-11%	65%
10. Putnam	1,11,12	10	24,458	34,886	10,428	43%	50%
	2,6,14,16	25	8,656	4,242	(4,414)	-51%	82%
	County Total	60	9,474	8,992	(482)	-5%	77%
NYMTC-10 Region	1,11,12	407	49,952	50,496	544	1%	32%
	2,6,14,16	1,398	18,777	16,986	(1,791)	-10%	60%
	NY-10 Region	1,963	24,359	23,136	(1,224)	-5%	51%
11. Orange	1,11,12	24	23,987	28,000	4,012	17%	41%
	2,6,14,16	58	14,565	10,997	(3,568)	-24%	60%
	7,8,9,17,19	47	6,991	6,447	(544)	-8%	96%
County Total	129	13,466	12,399	(1,067)	-8%	61%	
12. Dutchess	1,11,12	10	19,468	24,389	4,921	25%	37%
	2,6,14,16	36	10,412	9,416	(996)	-10%	49%
	County Total	100	7,624	7,773	149	2%	60%
NYMTC-12 Region							
Total	1,11,12	441	47,867	48,696	829	2%	33%
Network	2,6,14,16	1,492	18,410	16,568	(1,842)	-10%	61%
(NY,NJ,CT)	7,8,9,17,19	258	6,929	6,345	(584)	-8%	109%
	NY-12 Region	2,191	22,952	21,800	(1,152)	-5%	52%

Base Year Update 2002 - RC-55G-5C (050128)

Appendix 4-A2

BPM Base Year 2002 Transit Trip Validation – to Hub-Bound Counts

Total - All Transit							
BPM							
Sector		Trips		Counts		Error	% Diff
60th St.	1	940,285		909,103		31,182	3%
East River	2	1,261,257		1,276,632		-15,375	-1%
New Jersey	3	<u>327,769</u>		<u>334,737</u>		<u>-6,968</u>	<u>-2%</u>
		2,529,311		2,520,472		8,839	0%

Commuter Rail (only)							
BPM							
Sector		Trips		Counts		Error	% Diff
60th St.	1	99,677		100,286		-609	-1%
East River	2	141,987		140,466		1,521	1%
New Jersey	3	<u>74,252</u>		<u>75,842</u>		<u>-1,590</u>	<u>-2%</u>
		315,916		316,594		-678	0%

Other Transit							
BPM							
Sector		Trips		Counts		Error	% Diff
60th St.	1	840,608		808,817		31,791	4%
East River	2	1,119,270		1,136,166		-16,896	-1%
New Jersey	3	<u>253,517</u>		<u>258,895</u>		<u>-5,378</u>	<u>-2%</u>
		2,213,395		2,203,878		9,517	0%

Appendix 4-A3

Vehicle Miles of Travel (VMT) by County by Functional Class Group

Model Output for Base Year 2002

County	NYSDOT Functional Class Groups - excludes Ramps			VMT_Daily
	1 FC 1,11,12	2 FC 2,6,14,16	3 FC 7-9,17,19	Total
1 MANHATTAN	3,343,314	5,196,001	196,446	8,735,761
2 QUEENS	9,386,708	8,776,699	42,513	18,205,920
3 BRONX	4,751,775	2,470,557	345,448	7,567,780
4 BROOKLYN	3,729,775	7,190,360	173,647	11,093,782
5 STATEN ISLAND	2,047,335	2,168,885	18,129	4,234,350
6 NASSAU	10,811,780	12,380,352	1,390,144	24,582,276
7 SUFFOLK	12,439,755	15,655,338	2,281,329	30,376,422
8 WESTCHESTER	12,523,134	4,646,020	292,438	17,461,592
9 ROCKLAND	3,548,763	2,150,107	90,249	5,789,118
10 PUTNAM	1,737,873	501,422	333,925	2,573,219
11 ORANGE	4,010,624	3,860,906	1,901,188	9,772,718
12 DUTCHESS	1,764,090	3,070,868	1,262,315	6,097,273
13 NJTPA	76,258,655	65,144,212	50,801	141,453,668
14 CONNECTICUT	22,445,280	9,611,855	5,054,696	37,111,832
15 MERCER	5,381,910	6,230,248		11,612,158
Total	174,180,772	149,053,829	13,433,269	336,667,870
NYMTC 10 Counties	64,320,212	61,135,741	5,164,268	130,620,221
NYMTC 12 Counties	70,094,927	68,067,514	8,327,771	146,490,211

Model Base: 2002 Data (no Adjustments)

Model Base: 2002 Data - Stage 3 Re-Calibration (RC55G-5B) - January 2005

Appendix 5-A1

2002 BASE YEAR - Model - 1/28/2005 Transit Trip Summary - by Origin Districts Total Weekday

Subarea	Total Person Trips		
	to CBD	to Other	To All
"Downtown Manhattan"	122,406	259,878	382,284
"Valley Manhattan"	949,198	1,153,969	2,103,167
"Midtown Manhattan"	566,889	1,215,009	1,781,898
"Other Manhattan"	789,082	2,078,599	2,867,680
"Queens"	561,518	3,508,634	4,070,152
"Bronx"	127,079	2,241,255	2,368,335
"Kings"	488,947	3,836,552	4,325,499
"Staten Island"	27,428	1,207,976	1,235,405
"Nassau"	82,059	4,330,521	4,412,580
"Suffolk"	34,456	5,121,816	5,156,272
"Westchester"	46,533	2,150,575	2,197,108
"Rockland"	7,240	874,138	881,378
"Putnam"	1,936	275,134	277,070
"Orange"	3,740	1,026,226	1,029,966
"Dutchess"	6,411	768,537	774,948
"Fairfield"	15,804	2,800,216	2,816,020
"Bergen"	87,281	2,638,529	2,725,810
"Passaic"	23,995	1,353,261	1,377,256
"Hudson"	131,625	1,100,330	1,231,955
"Essex"	75,347	2,198,561	2,273,908
"Union"	31,977	1,564,122	1,596,099
"Morris"	14,424	1,612,843	1,627,267
"Somerset"	9,140	1,031,471	1,040,612
"Middlesex"	26,827	2,402,200	2,429,027
"Monmouth"	16,822	2,064,922	2,081,744
"Ocean"	4,466	1,649,466	1,653,932
"Hunterdon"	2,603	361,591	364,194
"Warren"	1,146	323,748	324,894
"Sussex"	2,199	425,757	427,955
"New Haven"	4,613	2,225,821	2,230,435
"Mercer"	5,619	1,194,768	1,200,387
Externals - NY	437	143,866	144,303
Externals - NJ	9,851	502,942	512,793
Externals - CT	1,295	316,702	317,997
All Origins	4,280,392	55,959,935	60,240,327

Subarea	Total Transit Trips		
	to CBD	to Other	To All
"Downtown Manhattan"	67,888	170,153	238,041
"Valley Manhattan"	515,835	706,582	1,222,417
"Midtown Manhattan"	309,763	756,860	1,066,623
"Other Manhattan"	479,326	1,147,724	1,627,050
"Queens"	382,006	959,894	1,341,900
"Bronx"	53,770	746,983	800,753
"Kings"	324,185	1,392,393	1,716,578
"Staten Island"	13,504	186,788	200,292
"Nassau"	47,539	447,885	495,424
"Suffolk"	21,653	227,530	249,183
"Westchester"	19,087	167,886	186,973
"Rockland"	1,578	21,221	22,799
"Putnam"	942	784	1,726
"Orange"	1,759	9,239	10,998
"Dutchess"	4,369	10,049	14,418
"Fairfield"	8,426	126,245	134,671
"Bergen"	48,046	188,154	236,200
"Passaic"	15,359	87,765	103,124
"Hudson"	99,889	255,206	355,095
"Essex"	52,543	349,050	401,593
"Union"	19,677	84,946	104,623
"Morris"	6,284	17,104	23,388
"Somerset"	4,485	5,877	10,362
"Middlesex"	16,043	31,662	47,705
"Monmouth"	10,895	23,527	34,422
"Ocean"	2,382	3,021	5,403
"Hunterdon"	957	576	1,533
"Warren"	536	541	1,077
"Sussex"	1,010	1,113	2,123
"New Haven"	2,883	69,997	72,880
"Mercer"	4,137	18,032	22,169
Externals - NY	0	0	0
Externals - NJ	0	0	0
Externals - CT	0	0	0
All Origins	2,536,756	8,214,787	10,751,543

Subarea	Transit Share		
	to CBD	to Other	To All
"Downtown Manhattan"	55%	65%	62%
"Valley Manhattan"	54%	61%	58%
"Midtown Manhattan"	55%	62%	60%
"Other Manhattan"	61%	55%	57%
"Queens"	68%	27%	33%
"Bronx"	42%	33%	34%
"Kings"	66%	36%	40%
"Staten Island"	49%	15%	16%
"Nassau"	58%	10%	11%
"Suffolk"	63%	4%	5%
"Westchester"	41%	8%	9%
"Rockland"	22%	2%	3%
"Putnam"	49%	0%	1%
"Orange"	47%	1%	1%
"Dutchess"	68%	1%	2%
"Fairfield"	53%	5%	5%
"Bergen"	55%	7%	9%
"Passaic"	64%	6%	7%
"Hudson"	76%	23%	29%
"Essex"	70%	16%	18%
"Union"	62%	5%	7%
"Morris"	44%	1%	1%
"Somerset"	49%	1%	1%
"Middlesex"	60%	1%	2%
"Monmouth"	65%	1%	2%
"Ocean"	53%	0%	0%
"Hunterdon"	37%	0%	0%
"Warren"	47%	0%	0%
"Sussex"	46%	0%	0%
"New Haven"	62%	3%	3%
"Mercer"	74%	2%	2%
Externals - NY	0%	0%	0%
Externals - NJ	0%	0%	0%
Externals - CT	0%	0%	0%
All Origins	59%	15%	18%

Appendix 5-A2

2002 BASE YEAR - Model - 1/28/2005 Transit Trip Summary - by Destination

	Total Person Trips	Total Transit Trips	Transit Share
Subarea	From All	From All	From All
"Downtown Manhattan"	384,928	239,656	62%
"Valley Manhattan"	2,108,508	1,225,553	58%
"Midtown Manhattan"	1,786,956	1,071,547	60%
"Other Manhattan"	2,869,936	1,628,433	57%
"Queens"	4,067,516	1,339,792	33%
"Bronx"	2,362,381	799,854	34%
"Kings"	4,323,700	1,714,435	40%
"Staten Island"	1,235,727	200,268	16%
"Nassau"	4,413,115	494,323	11%
"Suffolk"	5,157,490	248,757	5%
"Westchester"	2,196,377	186,741	9%
"Rockland"	885,294	22,778	3%
"Putnam"	277,028	1,711	1%
"Orange"	1,032,846	11,018	1%
"Dutchess"	780,301	14,482	2%
"Fairfield"	2,815,398	134,290	5%
"Bergen"	2,724,174	235,398	9%
"Passaic"	1,377,452	102,729	7%
"Hudson"	1,231,980	354,988	29%
"Essex"	2,273,725	400,701	18%
"Union"	1,596,204	104,066	7%
"Morris"	1,627,066	23,377	1%
"Somerset"	1,040,513	10,351	1%
"Middlesex"	2,428,193	46,954	2%
"Monmouth"	2,082,214	34,358	2%
"Ocean"	1,654,207	5,400	0%
"Hunterdon"	364,247	1,547	0%
"Warren"	324,579	1,083	0%
"Sussex"	428,141	2,130	0%
"New Haven"	2,228,215	72,584	3%
"Mercer"	1,200,368	22,239	2%
Externals - NY	140,837	0	0%
Externals - NJ	509,361	0	0%
Externals - CT	311,350	0	0%
All Destinations	60,240,327	10,751,543	18%

**2002 Update and Re-Calibration of the
NYMTC Best Practice Model (BPM) and PPSuite
For April 2005 Conformity Analysis**

March 31, 2005

Prepared by
PB Consult / Parsons Brinckerhoff
in Association with Urbitran

For the
New York Metropolitan Transportation Council

TABLE OF CONTENTS

1. EXECUTIVE SUMMARY	1
1.1 INTRODUCTION AND OVERVIEW	1
1.2 SUMMARY AND CONCLUSIONS	6
2 BPM DATA UPDATES	7
2.1 SocioEconomic Demographic (SED) Data - Base Year and 2030 Forecast Series.....	7
2.2 Updates with Census 2000 DATA.....	8
2.3 Highway Counts.....	8
2.4 Transit Counts.....	11
3 BPM NETWORK UPDATES	13
3.1 Highway.....	13
3.1.1 General Updates from Planning Studies Using the BPM.....	13
3.1.2 TIP Projects Completed Before or by 2002	13
3.1.3 Corrective Actions and Modifications as Part of Re-Calibration.....	15
3.1.4 Representation of Tolls in BPM Highway Network	14
3.1.5 Final BPM 2002 Updated Highway Network	16
3.2 Transit services and network update.....	17
3.2.1 Rail Transit Update	17
3.2.2 Bus Services Update.....	17
3.2.3 Transit Fares	17
4 IMPROVED BPM APPLICATION PROCEDURES	19
4.1 External Autos TRAVEL MODEL	19
4.2 Bus Preloads for highway Assignment.....	20
4.2.1 Bus Coding / Transit Route Correspondence to BPM Highway Network.....	20
4.2.2 Methods Developed.....	21
4.2.3 Transit/Highway Correspondence File.....	21
4.3 Multi-class highway Assignment.....	23
5 RE-CALIBRATION AND VALIDATION OF BPM 2002	25
5.1 Review of BPM 1996 Methods and Validation.....	25
5.2 RE-Calibration Process and principles	25
5.2.1 Initial Core Model Adjustments Review / Revision.....	28
5.2.2 Highway Network Characteristics.....	28
5.2.3 Counts – for Major Regional Crossings.....	28
5.2.4 Trip Table Evaluation.....	29
5.2.5 Highway Assignment Tests.....	29
5.2.6 Crossings and Tolled Facilities	29
5.3.1 Core Choice Models.....	33
5.3.2 Highway Assignment Validation	34
5.3.3 Transit Validation.....	43

6	POST PROCESSING FOR AIR QUALITY ANALYSIS (PPSUITE).....	1
6.1	Modifications for BPM Update and Mobile 6.....	1
6.2	Base Year Calibration (HPMS, VMT, speeds).....	2

APPENDIX A:	SUMMARY OF UPDATED SOCIOECONOMIC/DEMOGRAPHIC (SED) DATA	A-1
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APPENDIX B:	BPM 2002 CALIBRATION PARAMETERS	B-1
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APPENDIX C:	BPM 1996 AND 2002 – CORE MODEL “SCORE-CARD” REPORTS.....	C-1
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APPENDIX D:	DETAILED HIGHWAY VALIDATION RESULTS	D-1
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APPENDIX E:	NYMTC BPM MODEL – UPDATED YEAR 2003 TRANSIT NETWORK – RAIL AND FERRY SERVICES	E-1
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LIST OF TABLES AND FIGURES

Figure 1.1 New York Metropolitan Region: NYMTC and BPM Model Area	1
Figure 1.2 General Modeling Structure of the BPM.....	4
Table 2.1 Summary of Socioeconomic and Demographic Data (SED) Inputs for BPM.....	7
Table 2.2 Screenline Links by Functional Class Group and Priority Level.....	10
Table 2.3 Screenline Links by Functional Class Group and Data Source	10
Table 2.4 Transit Ridership Counts / Weekday Hub-Bound: 2002 and 1997 Base Years	12
Table 3.5 Year 2002 Projects Included in BPM 2002 Highway Network– Current TIP.....	13
Table 3.6 2002 Projects Included in BPM 2002 Highway Network – Prior TIP.....	14
Table 3.7 Major Regional Crossings - Corrections to the Number of Lanes.....	15
Table 3.8 Regional Crossings – Modifications to Free Flow Speeds and Link Capacities	14
Table 3.8 Base Year Transit Network Update – TIP Projects Included	18
Table 4.1 External Auto VMT as Percent of Total VMT – All Vehicles: Four New York City Boroughs	20
Table 4.2 BPM Highway / Transit Correspondence File Structure	22
Table 4.3 BPM Highway Network – Bus Route Correspondence Coding	23
Table 4.4 Revised Structure of BPM Highway Vehicle Trip Tables	24
Figure 5-1 General Structure of the BPM and Focus of BPM 2002 Re-Calibration	26
Table 5.1 Log of BPM Re-Calibration Runs	30
Table 5.1 Log of BPM Re-Calibration Runs (continued).....	32
Figure 5.1 Tour Lengths – BPM Re-Calibrated and RT-HIS Observed.....	33
Table 5-2 Inter-County Screenlines – Base / Model Calibration – 2002 Update	36
Table 5-3 Volume Group - 2002 Update Base / Model Calibration – All Screenline Links (only)	37
Table 5-4 Functional Class – 2002 Base / Model Calibration – Screenlines (only).....	37
Table 5-5 Simple Correlation - Model Volumes and Counts	38
Table 5-6 Hub-Bound Sectors and Regional Crossings – Vehicles 2002 Base / Model Calibration.....	39
Figures 5-3 Major Crossings - Volumes and Counts.....	40
Table 5-7 East River Sector - Summary of Tolled and Free Crossings: 2002 Volume Deviations from Count.....	42
Table 5-8 Daily Vehicle Miles of Travel (DVMT) And Total HPMS Estimates - 2002 Update - Base / Model Calibration – Network Links	42
Figure 5-4 BPM 2002 Transit Validation – Three Sectors Hub-Bound Sectors.....	43
Table 5-9 BPM 2002 Transit Validation – to Hub-Bound Counts	44
Table 6.1 VMT Totals for 2002 (Thousands of Vehicle Miles)	3
Figure 6.1. Comparison of Speeds for All Functional Classes	4

1. EXECUTIVE SUMMARY

1.1 INTRODUCTION AND OVERVIEW

1.1.1 Introduction: Model Update for Conformity Analysis

The purpose of this report is to document the work done in the past year to prepare the New York Best Practice Model (BPM), which refers to the set of data bases and regional travel demand models used by the New York Metropolitan Transportation Council, the New York Metropolitan Planning Organization (MPO) for the forecasting and estimation of mobile source emissions as part of the region's pending Conformity Analysis of the Transportation Improvements Plan (TIP) and Long Range Plan.

The report is organized according to the basic elements of the work that has been done to update and prepare the BPM and post-processing system for use in conformity analysis:

- Section 2: Updates of the data bases that support the BPM, from the original Base Year 1996/97 to a Base Year 2002 set, including updated base and future year Socioeconomic/Demographic (SED) data, 2000 Census data, as well as highway and transit counts.
- Section 3: Revision and updates to both the BPM highway and transit networks, including corrections and updates that incorporate improvements and changes implemented in the regional transportation system since the original base year.
- Section 4: Modification of several BPM application procedures, including a major improvement in the External Auto travel model, the inclusion of bus vehicle pre-loads in the highway assignment process, revisions to the multi-class assignment method, and the elimination of the Adaptive highway assignment methods as previously implemented for forecasting with the BPM for air quality analysis.
- Section 5: Re-Calibration of the BPM to a Base Year 2002, based on the revised set of input data and new calibration target data using the improved application procedures implemented in this update of the model.
- Section 6: Improvements to the post-processing procedures used with the BPM for air quality analysis, adapted to Mobile 6, and implemented within the new PPSuite platform.

1.1.2 Overview of the NYTMC Best Practice Model

A brief overview of the NYTMC Best Practice Models (BPM) is useful in understanding the BPM 2002 Update and Re-Calibration effort documented in this report. A complete description of the BPM can be found in the *General Final Report: New York Best Practice Model*¹.

¹ *General Final Report: New York Best Practice Model*. Draft Final – January 30, 2005. Prepared by Parsons Brinckerhoff / PB Consult for NYTMC.

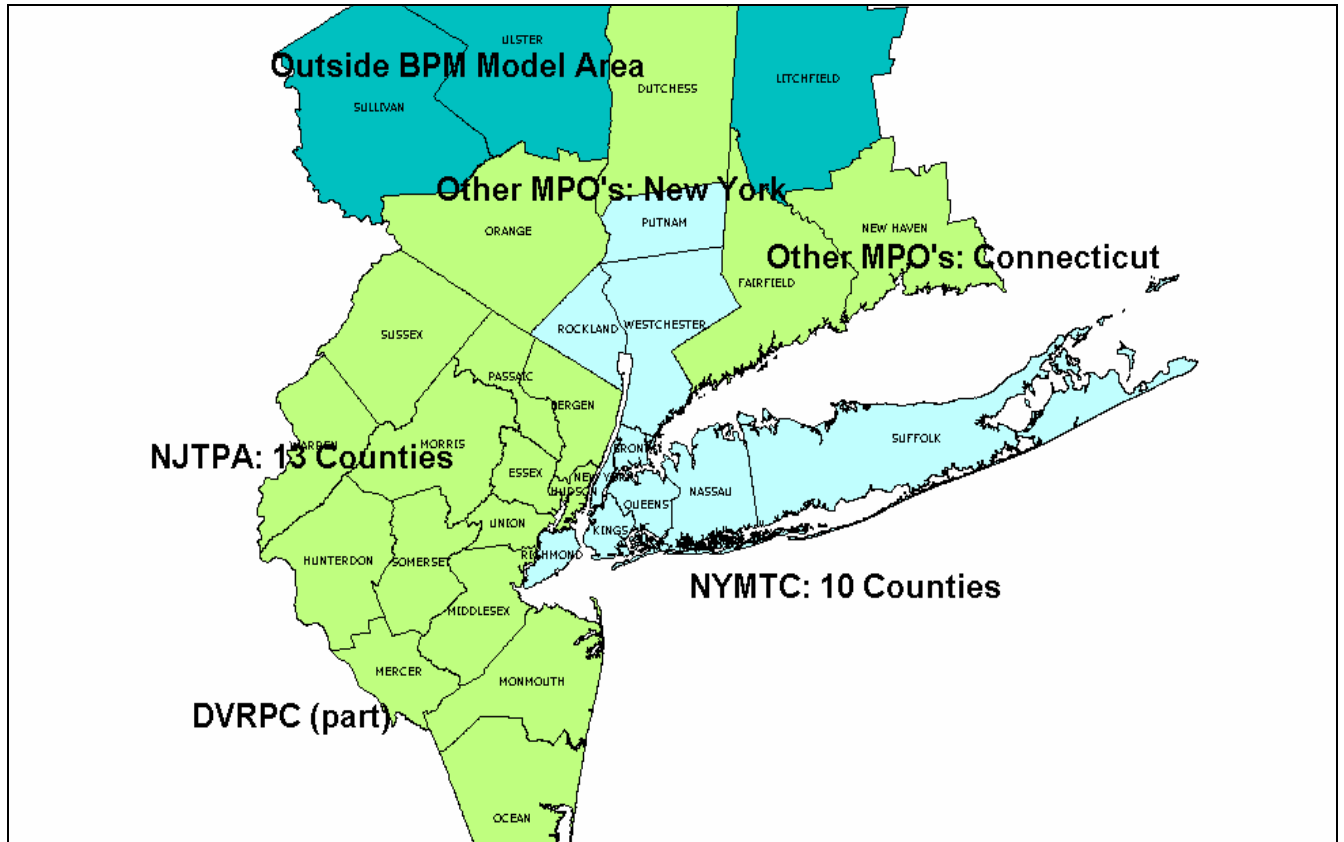
Regional Model Area

In order to adequately model travel in the New York region, the BPM networks, zones and the Regional Travel – Household Interview Survey (RT-HIS) survey data are representative of the full 28 county region. The focus of the planning application and calibration of the model to date, however, has been on the ten counties that comprise the NYMTC planning jurisdiction and air quality attainment area.

While for Conformity Analysis done by NYMTC with the BPM model is focused on twelve (12) New York counties, the BPM model area consists of the entire 28 county metropolitan region, including portions of New York, New Jersey, and Connecticut. It is comprised of more than 3,500 transportation analysis zones and includes most types of road facilities, from minor arterials and above, and all forms of public transportation. In addition to ten New York counties in the NYMTC planning regions, the BPM model area includes the thirteen counties in northern New Jersey that are part of the North Jersey Planning Authority (NJTPA), Mercer County (part of the Delaware Valley Regional Planning Commission or DVRPC), Dutchess and Orange Counties in the Hudson Valley, and Fairfield and New Haven Counties in Connecticut. The inclusion of Sussex, Warren, and Hunterdon Counties in New Jersey was that it established the Delaware River as the western boundary of the study area. This boundary dramatically reduces the number of external stations on the western border and encompasses virtually all of the transit and railroad services that cross the Hudson River.

The map included in Figure 1.1 below shows the BPM model study area.

Figure 1.1
New York Metropolitan Region: NYMTC and BPM Model Area



NYMTC (MPO) Counties
 1-New York (Manhattan)
 2-Queens
 3-Bronx
 4-Kings (Brooklyn)
 5-Richmond (Staten Island)
 6-Nassau
 7-Suffolk
 8-Westchester
 9-Rockland
 10-Putnam

Other New York
 11-Orange
 12-Dutchess

NJTPA (MPO) Counties
 14-Bergen
 15-Passaic

16-Hudson
 17-Essex
 18-Union
 19-Morris
 20-Somerset
 21-Middlesex
 22-Monmouth
 23-Ocean
 24-Hunterdon
 25-Warren
 26-Sussex

Other NJ Counties (part of DVRPC)
 28-Mercer

Connecticut Counties
 13-Fairfield
 27-New Haven

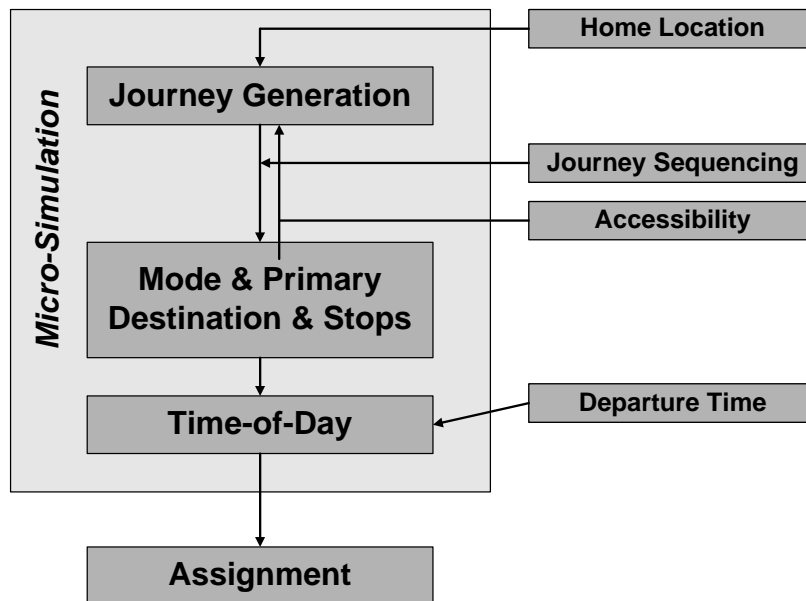
Model Structure

The BPM was designed and developed based on contemporary best practices in travel demand modeling and extensive field research over the last few years. The guiding principle in developing this model set was to incorporate the best modeling structures and components available that could be practically implemented within the project time and budget framework. As such, the BPM is representative of the emerging set of activity / tour-based models of regional travel demand models which are characterized by the following key features:

- Comprehensive coverage of *all modes and vehicle types* in detailed highway and transit simulations.
- Use of *tour* (or paired journeys) as the basic unit of modeling, instead of *trip* that is used in conventional demand models of the previous generation.
- Use of *micro-simulation* approach to generate forecasts that are discrete choices for individuals, as opposed to probabilities that represent market segment shares in conventional models.
- Using the contemporary conceptual framework of *daily activity agenda* of individuals with accounting for intra-household interactions between members and constraints on peoples' travel in terms of both time and space.
- The BPM is a complex model that is designed to predict the detailed travel patterns of the region's diverse population for all modes of travel, by introducing some important innovative extensions beyond conventional travel demand models.

The overall structure of the models and procedures that comprise the BPM is shown in the highly simplified schematic found in Figure 1.2. While in many respects, the data flow of the NYMTC model can be seen to be similar to that of conventional "4-Step" travel forecasting models – travel production, distribution, mode choice and assignment – the following main features of the BPM are distinctive, and represent best practice in travel demand modeling.

Figure 1.2 General Modeling Structure of the BPM



Journey-Based Models

Among its innovations is the new model's use of the concept of "journeys" rather than the more traditional "trips." The journey, defined as travel between principal locations, identifies anchor points in an individual's travel pattern, such as home, work or school.

In the conventional model, for example, a trip would be classified and analyzed as a home-to-work travel, only if its origin was home and its destination the workplace, and there were not intermediate stops made between the two points. If the individual were to make a stop at a day care center, gym or other for some other activity, the conventional model interprets the two isolated trips, and do not take into account that the general travel pattern is a commute to work. The use of the journey construct allows for the purpose and time of each segment to be linked, providing additional insight and accuracy for the modeling and predicting traveler decisions and analyzing their needs.

Thus use of the journey helps planners form a more realistic analysis that is based on the various decisions made by travelers between these locations, such as mode, purpose, destination, frequency and location of intermediate stops, as well as time of day periods. The nine million households of the study area generate 25 million paired journeys per day for the base year 1996.

Micro-simulation Approach

Where traditional models operate at the zone level, with matrix tables of aggregate flows, the BPM uses the micro-simulation method to simulate the travel pattern of each person and each individual journey in the region. The micro-simulation method provides many advantages, and a finer level of detail which, when combined with the BPM's use of the journey, increases the accuracy and usefulness of the travel demand forecasts.

Applications Software

The BPM was developed using a combination of customized programs and TransCAD GIS software. The models are run using a menu-driven system with partial user interaction, currently supported by the CENTRAL Software. The PPSUITE system is used for post-processing for CMS and Air Quality analysis.

The Highway and Road Network

The BPM highway network contains more than 53,000 links, including most minor arterial roadways and above-roadway facilities. The database includes information on number of lanes, functional class, speed, parking restriction, truck-usage. As inputs to the BPM core models, the networks are used to estimate travel times and distances between all parts of the regions (by Traffic Analysis Zones (TAZ's), and then for assignment of models forecast travel demand flows (trip tables) to produce link level volumes flows by vehicle class (Single Occupancy Vehicles (SOV), High Occupancy Vehicles (HOV), Taxi, Trucks, and Commercial Vans), as well as speeds reflecting volumes and capacities.

The Transit Network

The transit network in the BPM is a very complex network and is based on information provided by the Metropolitan Transit Authority (MTA), New Jersey Transit (NJ Transit), and other transit operators in the region. The network has 100 NY city subway routes, 900 commuter rail routes, 2300 bus routes and 50 ferry routes as well as the sidewalk network in Manhattan. In addition, the transit network components also include station to station transfer databases, walk/drive links for rail and other transit connectivity, route coding and fare coding.

1.2.3 Model Estimation, Calibration and Validation

The development of the BPM travel forecasting model was based on the statistical analysis of data specifically collected or otherwise related to the 28 County New York metropolitan region, and to resident travel within the region. While the form and structure of the BPM models are essentially generic, it is through the process of model estimation and calibration that the BPM has become a "local" model of travel within the tri-state region.

The estimation data sets for the original model development – Base Year 1996 – were constructed from various data sources in a format specific to each model and to the requirements of the ALOGIT software. The RT-HIS conducted in 1997 and 1998 constituted the primary data source for the model estimation. The RT-HIS was also the primary basis for the calibration of the BPM, supplemented by 1990 Census Data, such as the Public Use Micro-Sample (PUMS) data, and the Census Transportation Planning Package (CTPP) data. Highway volume assignments were calibrated based on the 1996 Screenline Count Data base.

1.2 SUMMARY AND CONCLUSIONS

The work that has been done to update and prepare the New York Best Practice Model and post-processing system for use in conformity analysis has accomplished the objectives set out for it, and has resulted in a set of tools that will allow NYMTC to adequately address mobile source emissions analysis as part of the conformity analysis process.

The key data bases that support the BPM were updated to a new Base Year 2000 from the original set of Base Year 1996/97 supporting databases, including updated base and future year Socioeconomic /Demographic (SED) data, 2000 Census data, and highway and transit counts needed for re-calibration and validation. Substantial revisions and updates have been made to both the BPM highway and transit networks, including corrections and updates that incorporate improvements and changes implemented in the regional transportation system since the original base year.

In addition, several BPM computer application procedures have been improved or added to the set of procedures that comprise the BPM modeling system. These include a major improvement in the External Auto travel model, correcting a major source of inaccuracy in the original model, and creating the opportunity for better calibration and validation of the BPM. Also, the ability to represent bus vehicle, from the transit network, as pre-loads in the highway assignment process was added, enhancing the realism of the traffic simulation on the region's road network, particularly for those roadways where significant numbers of buses affect carrying capacity. Revisions to the multi-class assignment method employed in the BPM were also made, along with the elimination of the Adjustment-to-Counts/Adaptive highway assignment methods previously implemented for forecasting with the BPM for use in air quality analysis.

Based on the revised full set of input data and new calibration target data developed as part of the BPM 2002 Update, and using the improved application procedures implemented in this update, the BPM was re-calibrated, with a marked improvement in the model's demonstrated ability to replicate observed highway and transit travel in the region's 28 county model area, and to provide reliable future year forecasts.

Finally, substantial adaptations and improvements to the post-processing procedures were implemented within the new PPSuite platform, linking the improved BPM with Mobile 6 for air quality analysis and emissions estimation.

2 BPM DATA UPDATES

2.1 SOCIOECONOMIC DEMOGRAPHIC (SED) DATA - BASE YEAR AND 2030 FORECAST SERIES

2.1.1 Basic SED Data Items for the BPM

The BPM uses a fairly limited subset of population and employment-related zonal data items required as inputs to both base year and future year model applications. The 15 specific zonal SED items are listed in Table 2.1.

**Table 2.1 Summary of Socioeconomic and Demographic Data (SED)
Inputs for BPM**

SED Item #	Description	Name	Units
1	Population in Households	HHPop	persons
2	Population in Group Quarters	GQPop	persons
3	Institutional	GQPopIns	persons
4	Street people	GQPopStr	persons
5	Other Group Quarters (Colleges & Universities, Military, etc.)	GQPopOth	persons
6	Number of Households	HHnum	households
7	Household Size (# of Persons):	HHSize	
8	Employed Labor Force - Workers (by residence)	ELF	persons
9	Mean Household Income	HHincx	1996 Dollars
10	Employment (at workplace) - Total	EmpTot	persons
11	Employment (at workplace) – Retail	EmpRet	persons
12	Employment (at workplace) – Office	EmpOff	persons
13	Earnings per worker (at workplace)	EarnWork	1996 Dollars
14	University enrollment (at institution)	UnvEnrol	persons
15	School enrollment: K-12 Total (at school)	K12ETot	persons

2.1.2 Base Year 2002 and 2030 SED Forecast Series

The original BPM was developed and calibrated using estimated Base Year 1996 SED zonal data. The update of the BPM for Base Year 2002 required the development of current estimates of the each of the data items listed in Table 2.1, also at the transportation analysis zone (TAZ) level.

The use the BPM for forecasting future travel demand inputs to the air quality emissions analysis process, requires future year SED data by zones, while the . The initial implementation and application of the BPM made use of the 2020 SED forecast series developed as part of the Transportation Models and Data Initiative (TMDI) project. As part of the BPM update described in this report, a new series of SED data inputs, was developed by Urbanomics for NYMTC, for both Base Year 2002 and forecast years. A full set of the BPM SED variables were developed at the zonal level for each of the following horizon years: 2000, 2002, 2003, 2005, 2010, 2015, 2020, 2025, and 2030. For interim years, such as 2007, a simple linear interpolation of each SED variable is used. A summary at the county level of the updated SED data used as inputs to the BPM for the Conformity Analysis, compared to the prior series can be found in Appendix A: County-Level Comparison of SED Data Inputs to the BPM.

2.2 UPDATES WITH CENSUS 2000 DATA

The update of the BPM included the use of new census data made available from Census 2000, replacing the prior data from the 1990 Census that was available when the original BPM was developed. This included:

- Public Use Micro Sample (PUMS) data, used to update the “control” joint distribution of households by income by number of workers used in the segmentation and microsimulation of households in the initial population synthesizer step of the BPM.
- Census Transportation Planning Package (CTPP), Part 3 or journey-to-work flow data, used to update estimated target values for the re-calibration of both the Destination and Mode choice models for work travel.

2.3 HIGHWAY COUNTS

The BPM screenline volume database was developed as the principal source of observed traffic volume data for use in Base Year 1996 calibration and validation of the BPM. It consisted of about 2,200 highway network link records, with estimated volume data by direction, by hour, for each link in the database. The screenline database covers the ten New York counties that comprise the NYMTC area, and all interstate crossings between New York and New Jersey. This section of the report provides documentation for the development of the BPM screenline database (SA1103.dbf) update from the original 1996 version to the current 2002 base year.

As part of screenline count update effort, NYMTC identified and compiled a set of traffic volume databases and documents from the various regional and sub-regional agencies, including New York State Department of Transportation (NYSDOT) TF3 files, New York City Department of Transportation (NYCDOT) intersection counts and county volume databases/reports. The appropriateness of each traffic volume database or document, as well as the validity of the

individual records were reviewed and incorporated into the 2002 NYMTC BPM screenline database. In the case of locations that were not updated with new counts, growth factors were developed and applied to the 1997 database volumes to project the 2002 values. The BPM screenline database consists of 2,268 highway network links, which translates to a total of 3,629 directional traffic count volumes. For locations where traffic counts are not available from either the 1997 or the 2002 update, traffic volumes are estimated using the TRAFFIC Volume Estimation Program (TRAVEP).

The screenline database updating process involved the following steps:

- Review the available traffic volume sources.
- Extract the applicable traffic volumes from available sources.
- Compile the traffic volumes into a single database.
- Select the most representative traffic volumes from multiple matching records.
- Index the traffic count volumes to year 2002 by applying growth factors.
- Run “TRAVEP ” - a program that applies adjustment factors, distributes daily traffic counts into 24-hourly volumes, and estimates traffic volumes for screenline links with no available traffic count volumes.

Three Levels of Screenlines: The 2,268 BPM highway network links that comprise the screenline database were selected to according to a three-level hierarchy of cutlines reflecting their significance for regional model calibration and analysis; (See Table 2.2).

- Priority 1: County Borders - screenlines have the highest significance capturing county-to-county travel flows (342 links)
- Priority 2: Intra-County Quadrants / Major – subdividing each county in quadrants (922 links)
- Priority 3: Sub-Quadrant /Minor– further subdividing screenlines (e.g., within county screenlines reflecting local travel patterns) have the lowest significance, in terms of regional analysis (960 links).

The data sources, including all documents and databases, such as NYSDOT TF3 files, NYCDOT intersection counts, county and sub-regional agency volume databases/reports and regional corridor or other transportation study reports, compiled by NYMTC in 2003, are regarded as the primary data sources for the 2002 BPM screenline database updating process. The secondary data sources reflect the observed traffic data from the 1997 BPM screenline database. (See Table 2.3)

A set of procedures were developed and performed to search for appropriate traffic volumes from each data source and convert into a format consistent with the 1997 pre-adjusted (i.e. containing non-estimated traffic volumes only) screenline database. All screenline link records updated in 2003 were then extracted from the individual data source files, and appended to the secondary data source (i.e. the 1997 pre-adjusted database). Finally, a selection process was performed to filter out multiple matching records for each screenline link.

Table 2.2 Screenline Links by Functional Class Group and Priority Level

Functional Class Group	Count Type/Source: Number of Links				Total
	Full Class Count	Other Actual or Partial Count	Agency Estimate: Daily	No Count - Estimated	
1 FC 1,11,12,20	375	9	42	44	470
2 FC 2,6,14,16	696	189	150	470	1505
3 FC 7-9,17,19	83	10	59	132	284
All Links	1154	208	251	646	2259
Functional Class Group	Count Type/Source: Percent of All Screenline Links				Total
	Full Class Count	Other Actual or Partial Count	Agency Estimate: Daily	No Count - Estimated	
1 FC 1,11,12,20	16.6%	0.4%	1.9%	1.9%	20.8%
2 FC 2,6,14,16	30.8%	8.4%	6.6%	20.8%	66.6%
3 FC 7-9,17,19	3.7%	0.4%	2.6%	5.8%	12.6%
All Links	51.1%	9.2%	11.1%	28.6%	100.0%

Table 2.3 Screenline Links by Functional Class Group and Data Source

Functional Class Group	Priority - Screenline Level: Number of Links			Total
	1:County	2:Major	3: Minor	
1 FC 1,11,12,20	95	183	190	470
2 FC 2,6,14,16	195	629	681	1,505
3 FC 7-9,17,19	58	120	106	284
All Links	348	932	962	2,259
Functional Class Group	Priority: Percent of All Screenline Links			Total
	1:County	2:Major	3: Minor	
1 FC 1,11,12,20	4.2%	8.1%	8.4%	20.8%
2 FC 2,6,14,16	8.6%	27.8%	30.1%	66.6%
3 FC 7-9,17,19	2.6%	5.3%	4.7%	12.6%
All Links	15.4%	41.3%	42.6%	100.0%

2.4 TRANSIT COUNTS

The transit counts available for use in the BPM Base Year 2002 Update were taken from the draft Hub-Bound Travel 2002 Report, made available by NYTMC. Specifically, the total number of persons entering the Manhattan Central Business District (CBD), on a typical Fall weekday, were obtained from that report's "Table 14: Where, When and How People Entered the Hub on a Fall Day in 2002."

The 2002 estimates, along with the 1997 estimates used in the original BPM validation are shown in Table 2.4, by the three sectors: 60th Street (from the North, East River Sector (from the East), and New Jersey Sector (from the West). The table shows a substantial growth in transit in the five year period between these base years, with a 12 percent increase overall, and a 26% increase in Commuter Rail, and nearly a 50% increase in ferries.

Table 2.4 Transit Ridership Counts / Weekday Hub-Bound: 2002 and 1997 Base Years

PART A: TOTAL WEEKDAY - 2002 - INBOUND

	60TH ST SECTOR	BROOKLYN SECTOR	QUEENS SECTOR	STATEN ISLAND SECTOR	COMBINED: EAST RIVER	N. J. SECTOR	ALL SECTORS
Bus	56,991	33,227	17,232		50,459	153,030	260,480
Rapid Rail	<u>751,826</u>	<u>644,741</u>	<u>406,895</u>		<u>1,051,636</u>	<u>73,166</u>	<u>1,876,628</u>
Subway and Bus	808,817	677,968	424,127		1,102,095	226,196	2,137,108
Ferry & Tram		282	<u>1,140</u>	<u>32,649</u>	<u>34,071</u>	<u>32,699</u>	<u>66,770</u>
Subway+Bus+Ferry	808,817	678,250	425,267	32,649	1,136,166	258,895	2,203,878
Commuter Rail	100,286	1,457	139,009		140,466	75,842	316,594
Total Transit	909,103	679,707	564,276	32,649	1,276,632	334,737	2,520,472

PART B: TOTAL WEEKDAY - 1997 - INBOUND

	60TH ST SECTOR	BROOKLYN SECTOR	QUEENS SECTOR	STATEN ISLAND SECTOR	COMBINED: EAST RIVER	N. J. SECTOR	ALL SECTORS
Bus	58,105	18,016	19,577		37,593	141,840	237,538
Rapid Rail	<u>658,686</u>	<u>610,429</u>	<u>401,789</u>		<u>1,012,218</u>	<u>40,662</u>	<u>1,711,566</u>
Subway and Bus	716,791	628,445	421,366		1,049,811	182,502	1,949,104
Ferry & Tram		21	<u>1,667</u>	<u>30,134</u>	<u>31,822</u>	<u>12,892</u>	<u>44,714</u>
Subway+Bus+Ferry	716,791	628,466	423,033	30,134	1,081,633	195,394	1,993,818
Commuter Rail	92,182		113,824		113,824	44,742	250,748
Total Transit	808,973	628,466	536,857	30,134	1,195,457	240,136	2,244,566

PART C: TOTAL WEEKDAY - Growth in Transit Trips

	60TH ST SECTOR	BROOKLYN SECTOR	QUEENS SECTOR	STATEN ISLAND SECTOR	COMBINED: EAST RIVER	N. J. SECTOR	ALL SECTORS
Bus	(1,114)	15,211	(2,345)		12,866	11,190	22,942
Rapid Rail	<u>93,140</u>	<u>34,312</u>	<u>5,106</u>		<u>39,418</u>	<u>32,504</u>	<u>165,062</u>
Subway and Bus	92,026	49,523	2,761		52,284	43,694	188,004
Ferry & Tram		261	(527)	<u>2,515</u>	<u>2,249</u>	<u>19,807</u>	<u>22,056</u>
Subway+Bus+Ferry	92,026	49,784	2,234	2,515	54,533	63,501	210,060
Commuter Rail	8,104	1,457	25,185		26,642	31,100	65,846
Total Transit	100,130	51,241	27,419	2,515	81,175	94,601	275,906

PART D: TOTAL WEEKDAY - Percent Growth in Transit

	60TH ST SECTOR	BROOKLYN SECTOR	QUEENS SECTOR	STATEN ISLAND SECTOR	COMBINED: EAST RIVER	N. J. SECTOR	ALL SECTORS
Bus	-2%	84%	-12%		34%	8%	10%
Rapid Rail	<u>14%</u>	<u>6%</u>	<u>1%</u>		<u>4%</u>	<u>80%</u>	<u>10%</u>
Subway and Bus	13%	8%	1%		5%	24%	10%
Ferry & Tram		<u>1243%</u>	<u>-32%</u>	<u>8%</u>	<u>7%</u>	<u>154%</u>	<u>49%</u>
Subway+Bus+Ferry	13%	8%	1%	8%	5%	32%	11%
Commuter Rail	9%		22%		23%	70%	26%
Total Transit	12%	8%	5%	8%	7%	39%	12%

3 BPM NETWORK UPDATES

3.1 HIGHWAY

A major component of the BPM 2002 Update was the coding of corrections and updates for the NYMTC Base Highway Network, from which a new Base Year 2002 network was built using the standard BPM project coding and updating procedures (“Step 1 / Step 2 and Build” processes). The new coding that was applied to the 1996 Base to obtain a 2002 new base network came from three general sources as described below.

3.1.1 General Updates from Planning Studies Using the BPM

Coding updates done by consultants and other agencies using the NYMTC BPM as part of planning studies in the region provided useful information to update the BPM 2002 highway network as a result data developed in these corridor studies. These included existing year highway network update projects coded by:

- Earth Tech, as part of the Tappan Zee Bridge Study in the Mid-Hudson corridor.
- Parsons Transportation Group, as part of the Gowanus Major Investment Study (MIS) in Brooklyn.
- PB Consult, with data developed by URS as part of the Bruckner-Sherridan MIS in the Bronx.

3.1.2 TIP Projects Completed Before or by 2002

With input from the member NYCTCCs (New York City, Nassau, and Suffolk), these network updates were incorporated to reflect prior TIP projects that were built since the 1996 base year BPM network. The prior Step 1 / Step 2 BPM coding from prior TIP analyses could be used to incorporate these changes into the updated BPM 2002 Base Year. The projects considered completed and included in the BPM 2002 Update as programmed in the current TIP are shown in Table 3.5, and those from the prior TIP in Table 3.6.

Table 3.5 Year 2002 Projects Included in BPM 2002 Highway Network– Current TIP

Project Number	PIN	Project Description	Date Completed
032	812644	TSP: ROUTE 6-ROUTE 202	8/2001
040	872959	I287 STAGE 2A - INTERCHANGE 5	1/2002
058	RTP1700	YONKERS HARNEY ROAD BRIDGE	4/2000
060	RTP2000	PELHAM ROAD MAIN ST. TO NYC LINE	10/2002
096	022881	LIE HOV - EXIT 61-64 4TH LANE CONST	12/2001
098	032775	NY25A REC COLD SPRNG-108	12/2000
111	X73085	I-278 GOWANUS EXPRESSWAY	4/2000
126	022895	LIE HOV - I-495 4TH LANE EXITS 32-36	4/2001
128	022897	LIE HOV - I-495 4TH LANE EXIT 36-40 PHASE I	4/2001
129	022913	OLD NICHOLS ROAD OVER I-495 BR REPLACEMENT	6/2002
130	075599	LI MOTOR PARKWAY OVER I-495 BR REHAB	6/2002
143	848018	RTE 202 ROAMS TO OLD COUNTY	11/2001
151	X80425	GCP RAMP ACCESS IMPROVEMENT TO FLUSHING MEADOW	7/1998

Table 3.6 2002 Projects Included in BPM 2002 Highway Network – Prior TIP

New York City Transportation Coordinating Council (NYC TCC)

No.	PROJECTS	PIN_NO	COUNTY	PROJ_NAME	COMPLETION DATE	PROGRAM	YEAR	COMMENTS
1	PROJ114	X02427	NEW YORK	ROUTE 9A RECONSTRUCTION, SEGMENT 7	2000	COMMITTED	2002	Completed
2	PROJ113	X02426	NEW YORK	ROUTE 9A RECONSTRUCTION, SEGMENT 6	2001	COMMITTED	2002	Completed
3	PROJ112	X02425	NEW YORK	ROUTE 9A RECONSTRUCTION, SEGMENT 5	2000	COMMITTED	2002	Completed
4	PROJ111	X02424	NEW YORK	ROUTE 9A RECONSTRUCTION, SEGMENT 3	2000	COMMITTED	2002	Completed
5	PROJ110	X02423	NEW YORK	ROUTE 9A RECONSTRUCTION, SEGMENT 2	2001	COMMITTED	2002	Completed
6	PROJ104	X02422	NEW YORK	ROUTE 9A RECONSTRUCTION (STATE ST. T	2002	TIP	2002	Completed
7	PROJ034	X73092	RICHMOND	STATEN ISLAND EXPRESSWAY TSM IMPROVE	2002	TIP	2002	Completed
8	PROJ030	X73088	KINGS	I-278 GOWANUS EXPRESSWAY	2001	TIP	2002	Completed
9	PROJ030	X73085	KINGS	I-278 GOWANUS EXPRESSWAY	2000	TIP	2002	Completed
10	PROJ028	X73068	RICHMOND	STATEN ISLAND EXPWY PAVEMENT RESURFA	2000	TIP	2002	Completed
11	PROJ028	XT1551	RICHMOND	TRANSIT MOBILITY ENHANCEMENTS.PHASE	2002	TIP	2002	X731.08 Completed 200
12	PROJ025	X03405	QUEENS	LONG ISLAND EXPWY/CLEARVIEW EXPWY IN	2002	TIP	2002	Completed
13	PROJ024	X09619	RICHMOND	WEST SHORE EXPRESSWAY ACCESS IMPROVE	2002	TIP	2002	Completed
14	PROJ017	X72037	BRONX	MAJOR DEEGAN EXPWY: WEST FORDHAM RD	2001	TIP	2002	Due in 2004
15	PROJ016	X05150	QUEENS	RECONFIGURATION OF GRAND CENTRAL PAR	1999	TIP	1999	Completed
16	PROJ109	X02421	NEW YORK	ROUTE 9A RECONSTRUCTION, SEGMENT 4	1998	COMPLETED	1998	Completed
17	PROJ107	X80425	QUEENS	GCP RAMP ACCESS IMPROVEMENT TO FLUSH	1998	COMPLETED	1998	Completed

Nassau-Suffolk Transportation Coordinating Council (NS TCC)

No.	PROJECTS	PIN_NO	COUNTY	PROJ_NAME	COMPLETION DATE	PROGRAM	YEAR	Comments
1	PROJ080	080433	NASSAU	NY25B: HILLSIDE AVE/NYC LINE TO NY	2001	TIP	2002	Under Const. 9/30/03
2	PROJ069	075614	SUFFOLK	CR67 MOTOR PWY BR WIDEN/LIE @ EX55	2000	TIP	2002	Under Design
3	PROJ044	022898	NASSAU	LIE HOV - I-495 4TH LANE EXITS 36-39	2001	COMMITTED	2002	Completed
4	PROJ044	022897	NASSAU	I-495 BRIDGE WIDENING EX 36-38	2000	COMMITTED	2002	Completed
5	PROJ041	022865	SUFFOLK	LIE HOV - SERVICE ROAD CONST EX 65-67	2002	COMMITTED	2002	
6	PROJ040	022862	SUFFOLK	LIE HOV - I495 SERVICE RD CONST. EXT 63 -64 & 65 -6	2002	COMMITTED	2002	Combined w/22865 Under Const. 12/31/03
7	PROJ026	075747	SUFFOLK	SMITHTOWN CBD - HIGH PRIORITY PROJEC	2001	TIP	2002	Completed
8	PROJ008	075745	NASSAU	MILL POND CONNECTOR RD PRATT BLVD - GARVIES	2002	TIP	2002	Under Design
9	PROJ006	075739	SUFFOLK	PATCHOGUE INTERMODAL HUB EXTENSION WEST A	2002	TIP	2002	Under Design
10	PROJ042	022881	SUFFOLK	LIE HOV - EXIT 61-64 4TH LANE CONST	1999	COMMITTED	1999	Completed
11	PROJ031	022860	SUFFOLK	I-495 4TH SERVICE RD. CONST EXIT 63-64	1999	COMMITTED	1999	Completed
12	PROJ004	053465	SUFFOLK	HECKSHER STATE PWY (HSP) CONT RAMP FED COMP	1999	TIP	1999	Completed
13	PROJ063	022875	NASSAU	I495 -4TH LANE EXIT 46-49	12/1998	COMPLETED	1998	Completed
14	PROJ064	032775	MULTI	NY25A REC COLD SPRNG- NY 108	1999	TIP	1999	Completed

Mid-Hudson Transportation Coordinating Council (MHS-TCC)

No.	PROJECTS	PIN_NO	COUNTY	PROJ_NAME	COMPLETION DATE	PROGRAM	YEAR	Comments
1	PROJ098	875608	WESTCHESTER	NORTH AVENUE TRAFFIC SIGNAL IMPROVEM	2000	TIP	2002	Under Construction
2	PROJ092	848018	ROCKLAND	RTE. 202: ROSMAN ROAD-OLD COUNTY ROA	2000	COMMITTED	2002	Completed
3	PROJ091	839059	WESTCHESTER	RT. 6: STRAWBERRY-RT. 132	2000	TIP	2002	Completed
4	PROJ090	813064	PUTNAM	ROUTE 22: 1-84 - CR 65	2002	TIP	2002	To be constructed 12/06
5	PROJ089	812644	WESTCHESTER	TSP: ROUTE 6-ROUTE 202	2002	TIP	2002	Under Construction
6	PROJ027	H19	WESTCHESTER	RAMPS CONNECT TAPPANZEE BRDG TOLLPLA	2001	COMMITTED	2002	Under Construction
7	PROJ010	806205	ORANGE	STEWART AIRPORT ACCESS IMPROVEMENT	2001	TIP	2002	Under Construction
8	PROJ108	839044	WESTCHESTER	ROUTE 6J CONKLIN AVENUE TO BAKER STR	12/1996	COMMITTED	1999	Completed
9	PROJ103	TUXEDO	ROCKLAND	RH TUXEDO DEVELOPMENT	2017	COMMITTED	1999	planning study
10	PROJ097	875521	ROCKLAND	PASCACK ROAD CONNECTOR	12/1997	COMMITTED	1999	Completed
11	PROJ095	875155	ROCKLAND	VIOLA ROAD EXTENSION	11/1998	TIP	1999	Completed
12	PROJ088	812611	WESTCHESTER	TSP STAGE 4: RT 117	1994	COMMITTED	1999	Completed
13	PROJ064	032775	MULTI	NY25A REC COLD SPRNG-108	1999	TIP	1999	not our region
14	PROJ099	PALISA	ROCKLAND	PALISADES CENTER DEVELOPMENT	1998	COMPLETED	1998	Completed
15	PROJ087	803027	ROCKLAND	RT 59: FOREMAN-HUTTON	12/31/97	COMPLETED	1997	Completed
16	PROJ086	803023	ROCKLAND	ROUTE 59: HUTTON AVE-PIP	12/13/96	COMMITTED	1996	Completed
17	PROJ085	802010	WESTCHESTER	RTE 119: MEADOW-BENEDICT	1995	COMPLETE	1995	Completed

3.1.3 Corrective Actions and Modifications as Part of Re-Calibration

This coding was done by the consultant team with assistance and guidance from the NYMTC staff regarding corrections needed to make the BPM base network a more accurate representation of the regional transportation system and included the following:

- Updated Bridge Crossings Lane Configurations with assistance from NYMTC and NYCDOT in gathering information on specific crossings (See Table 3.7).
- NYSDOT's designated Truck Route system incorporated into network data base using the Truck restriction code, with minor corresponding modifications made to the path-building procedures for trucks in the multi-class assignment procedures.
- Functional Class and County Code corrections from a list of links submitted by NYMTC.
- Corrections to disconnected links in the TransCAD network data base.
- Revised Capacities and Free Flow speed estimates for selected major regional crossings implemented as part of the network review and assignment calibration process (See Table 3.8).

Table 3.7 Major Regional Crossings - Corrections to the Number of Lanes

Major Crossing	EB_DIR	Prior BPM 1996 Networks Coding				Updated BPM 2002 Networks Coding			
		AM	MD	PM	NT	AM	MD	PM	NT
G WASHINGTON BRIDGE	0 WB Link	6	6	6	6	7	7	7	7
	1 EB Link	6	6	6	6	7	7	7	7
	Both Directions	12	12	12	12	14	14	14	14
MANHATTAN BRIDGE	0 WB Link	5	2	2	2	3	3	2	3
	1 EB Link	2	5	5	5	2	2	3	2
	Both Directions	7	7	7	7	5	5	5	5
WILLIAMSBURG BRIDGE	0 WB Link	4	4	4	4	4	4	4	4
	1 EB Link	4	4	4	4	4	4	4	2
	Both Directions	8	8	8	8	8	8	8	6
QUEENS MIDTOWN TUNNEL	0 WB Link	3	2	2	2	3	2	2	2
	1 EB Link	2	2	2	1	2	2	2	1
	Total	5	4	4	3	5	4	4	3
WASHINGTON BRIDGE	0 WB Link	2	2	2	2	3	3	3	3
	1 EB Link	2	2	2	2	3	3	3	3
	Both Directions	4	4	4	4	6	6	6	6
MADISON AVENUE BRIDGE	Both Directions	6	6	6	6	4	4	4	4

Table 3.8 Regional Crossings – Modifications to Free Flow Speeds and Link Capacities

CROSSING	CROSSINGID	EB_DIR	ID	Functional Class	Free Flow Speed		Capacity: VPLH (a)	
					1996	2002	1996	2002
1	OUTERBRIDGE CROSSING	0 WB Link	160802	11	65	65	2,150	1,800
1	OUTERBRIDGE CROSSING	1 EB Link	160801	11	65	65	2,150	1,800
2	GOETHALS BRIDGE	0 WB Link	160804	11	50	50	1,600	1,650
2	GOETHALS BRIDGE	1 EB Link	160803	11	50	50	1,600	1,650
3	BAYONNE BRIDGE	0 WB Link	160805	11	46	46	1,600	1,650
3	BAYONNE BRIDGE	1 EB Link	160806	11	58	58	2,050	1,650
4	HOLLAND TUNNEL	0 WB Link	90843	14	40	24	1,350	1,500
4	HOLLAND TUNNEL	1 EB Link	90842	14	40	24	1,350	1,500
5	LINCOLN TUNNEL	0 WB Link	90363	11	40	40	1,400	1,500
5	LINCOLN TUNNEL	1 EB Link	90362	11	40	40	1,400	1,500
6	G WASHINGTON BRIDGE	0 WB Link	90374	11	46	46	1,600	1,800
6	G WASHINGTON BRIDGE	1 EB Link	90375	11	46	46	1,600	1,800
7	TAPPAN ZEE BRIDGE	0 WB Link	76392	11	54	54	2,000	1,800
7	TAPPAN ZEE BRIDGE	1 EB Link	76382	11	54	54	2,000	1,800
11	BROOKLYN BATTERY TUNNEL	0 WB Link	58026	11	40	24	1,300	1,300
11	BROOKLYN BATTERY TUNNEL	1 EB Link	58027	11	40	24	1,300	1,300
13	MANHATTAN BRIDGE	0 WB Link	58338	14	42	20	1,500	1,500
13	MANHATTAN BRIDGE	1 EB Link	90870	14	42	20	1,500	1,500
19	TRIBOROUGH BRIDGE (North)	0 WB Link	64930	11	50	24	1,600	1,600
19	TRIBOROUGH BRIDGE (North)	1 EB Link	64928	11	50	24	1,600	1,600

NOTES: (a) Vehicles per Lane per Hour - "LOS E"

3.1.4 Representation of Tolls in BPM Highway Network

The BPM was originally developed for Base Year 1996, using survey data and other inputs developed for that point in time, including tariffs or the toll facilities in the region. The behavioral relationship estimated for the travel choice models between travelers' perception of the relative disutility of travel time and monetary cost reflects conditions at that point in time. In other words, the value of time implied by the BPM choice models are appropriately expressed in 1996 dollars.

Tolls are coded in the BPM highway network data base in a simple manner, with the cash auto toll value, or the cash heavy truck estimated average toll coded on links where tolls are charged, with tariff values being those in place in 1996/97. This basic representation of tolls ignores various forms of discounts available to different travel segments, but was a reasonable way to incorporate the toll component of travel into the BPM choice models as part of their statistical estimation, and for the calibration of the assignment procedures.

With the introduction of EZ-Pass, and various time-of-day toll policies in the region, starting with the Port Authority of NY/NJ's March 2001 toll change, this method represents even more of a simplification of reality than it did when originally implemented in the BPM. As part of planning for the BPM 2002 Update, consideration was given to the modifications to the BPM data

structures and enhancements to the choice models that would be needed to better address the new tolling policies, and also to account for generally higher average toll costs (at least in nominal dollars). It was determined that a meaningful improvement in how the BPM could model tolls will require time and resources beyond those available given the region's timeline for Conformity Analysis. This work will require:

- Modification of the highway network attribute data structure to code time-of-day-specific tolls, by more detailed vehicle classes and/or payment types. This may also require a specific and detailed coding of toll plazas in order to represent advantages of EZ-Pass properly in terms of delay.
- Implementing a procedure within the BPM application to “re-index” (e.g. by CPI) the estimated value of time related coefficients on cost components in the choice model utility expressions. This in turn could require analysis of average regional population income growth and its relation to structural changes in household income groups used in the model segmentation.
- Development of behaviorally based time-of-day choice models, sensitive to travel times and toll costs, to replace the current standard practice method of diurnal patterns for daily journeys, based on trip purpose, mode, and destination, as derived from the Regional Travel Household Interview Survey.

Even without having these substantial changes to the BPM in place, the application of the current BPM for Conformity Analysis is thought to constitute a reasonable method to support the estimation of mobile source emissions at this time for the following reasons:

- Toll and transit fare policies are exempt and not specifically a focus of analysis. Also, for region estimation of emissions, the details of temporal and/or spatial distribution of traffic flows are less important and tend to compensate each other compared to the aggregate statistics at the daily level of flows between large areas.
- In terms of “real” or 1996 dollars, the increases in tolls in the region are not as large as the differences in the nominal dollar amounts would imply. Taking into account that perceived value of time normally grows slightly faster than real income and that travel habits in the region are quite stable, it is reasonable to assume that perception of tolls in most cases are currently at a reasonably similar level compared to 1996.
- The range in time-of-day toll differentials introduced in the region are still fairly narrow, and recent econometric analysis has found the impacts statistically significant and positive, but reflecting relatively small price elasticities with respect to changes in demand by time period and mode.¹ Extensive statistical analysis of the travel habits and estimation of the journey frequency, mode choice, and destination choice components of the NYMTC model have clearly shown that the biggest part of the observed variance in travel behavior in the region can be explained by socioeconomic composition of a household and related geographical self-choices of the residential and workplace locations. Transport policies may, of course, change travel habits only if very significant measures are applied (for example, radical congestion pricing schemes).

Note that a summary of the BPM 2002 model volumes compared to counts for the East River sector, comprised of both free and tolled crossings, is found in Appendix D: Exhibits D-4-1 through D-4.5 – Crossings Volume Report.

¹ K. Ozbay, D Ozmen-Ertekin, and J. Huguin-Veras. “Analysis of the Value Pricing Impacts at NY/NJ Port Authority Facilities. November 15, 2004. Paper submitted for TRB 84th Annual Meeting, 2005.

It should also be noted that in order to improve the BPM for its use in the analysis of tolled facilities, NYMTC is commissioning new work to evaluate the model's performance with a set of sensitivity tests regarding estimated values of time, and to formulate methods to incorporate time-of-day toll structures and true time-of-day choice as enhancements to the BPM.

3.1.5 Final BPM 2002 Updated Highway Network

These updates were incorporated into the base network, along with other minor corrections, throughout the recalibration process. At each of the three stages, an updated base network was released.

- Stage 1 – Release of HN040928.dbd released September 28, 2004
- Stage 2 – Release of HN041115.dbd released November 15, 2004
- Stage 3 – Release of HN050131.dbd released February 4, 2005

The Stage 3 BPM Base Year 2002 Highway Network represents the most extensive of the updates and incorporates the changes made for the prior stages. In a final step, the updated Stage 3 Base Year 2002 highway network was reviewed for connectivity and stability for its use as the foundation for and integration with the Stage 1 / Stage 2 Project and Change files created by NYMTC in a parallel effort. Minor corrections were made in this last network update step, primarily to reconcile TransCAD network link ID's, in order to ensure that the coding of future year TIP and Long Term Plan improvements could be integrated with the updated base year network to create the future year scenario networks needed for Conformity Analysis.

3.2 TRANSIT SERVICES AND NETWORK UPDATE

The BPM 2002 updated transit network was developed in two stages – for rail and ferry transit services, and for bus route changes.

3.2.1 Rail Transit Update

In the first stage, the consultant team (AECOM Consult) updated all the rail service, reflecting operational and schedule changes in effect as of Spring 2003.

These included service changes for the following rail operations:

- Long Island Railroad (LIRR)
- Metro North Railroad
- New Jersey Transit Commuter Railroad
- PATH
- New York City Transit Subway Services
- Hudson-Bergen LRT Service
- Various Ferry Services

The specific changes incorporated in the rail service update are listed in detailed technical memorandum found in Appendix E.

3.2.2 Bus Services Update

A major effort was made by NYTMC, with the cooperation of the MTA and New York City Transit to update the bus routes and operational data to reflect Year 2002 bus services in the New York portions of the BPM model area. This new coding represented a major improvement to the original bus network coding that was compiled for the original Base Year 1996 BPM. As listed in Table 3.8, bus service improvements programmed for 2002 were added to the base year transit network, in addition to earlier bus route updates.

3.2.3 Transit Fares

Consistent with the BPM modeling practice in which the original model calibration occurred with 1997 fares, the updated BPM 2002 transit network was coded with the same fares as the 1997 base year network.

Table 3.8 Base Year Transit Network Update – TIP Projects Included

Base Year Transit Network update - TIP Projects included				
	BS02v05 (Base Year 2002 - Updated with all projects as of 12/30/2004)			
Sl. No.	PIN	PROJ NAME	Completion Date	Coded by
	Files used for update BS03V01 - after Bus Network update by NYMTC). Released BS02v04 with all TIP projects received as of September 2004.			
1	L302/01/2A	LIRR: Platform 11	8/31/96	AECOM
2	M02A-06-13	MNR: Cortland Station Replaces Crugers and Montrose on Hudson Line	12/31/96	AECOM
3	L/302/05/5E	Merrick Parkers	10/01/98	NYMTC
4	8756.91	Brewster North RR Parking	12/31/98	NYMTC
5	L301-02-1J	LIRR: Purchase of Diesel Bi-Level Cars	12/31/99	AECOM
6	M02A-03-02	MNR: North End Access, GCT	12/31/99	AECOM
7	L301-02-1K	LIRR: Regular and Dual Mode Locomotives	03/31/00	AECOM
8	L/02/5L	Nassau County Parking	07/01/00	NYMTC
9	080659	Suffolk County Express (The Clipper)	7/31/00	NYMTC
10	M307-01-01	MNR: Harlem Line Extension to Wassaic	7/31/00	AECOM
11	L/02/5K	Farmingdale Parking	10/01/00	NYMTC
12	882244	Croton Falls Shuttle - includes PIN 882243 (prior year)	12/31/00	NYMTC
13	L302/05/4N	Speonk Commuter Parking Expansion	06/01/01	NYMTC
14	L302/05/5X	Port Jefferson Parking	07/01/01	AECOM
15	075814	SC Innovative Transit	07/31/01	AECOM
16	882300	Tappan Zee Express	07/31/01	AECOM
17	L/02/7V	Suffolk County Parking	09/01/01	AECOM
18	L302/09/CD	Deer Park Commuter Parking Expansion	12/01/01	NYMTC
19	L/302/05/5H	Bellmore Parking	02/01/02	NYMTC
20	NJTPSEEDS	PSNY East End Concourse	9/30/02	AECOM
21	M302-09-22 / 804406 / 804407	Goldens Bridge Parking	10/31/02	NYMTC
22	L/02/52	Babylon Station Rehab & Intermodal Center	09/01/01	NYMTC
23	8756.78	Croton Station Parking	11/30/99	NYMTC
24	EN12-4743	63rd Street Connection	12/31/02	AECOM
25	882219	West shore Express Bus	12/31/1999	NYMTC
26	80726	Transit Block - Merrick Shuttle	10/31/2002	NYMTC
27	75813	Transit Block - LI Bus	10/31/2002	NYMTC
28	882279	Taconic Express Bus	10/31/2002	NYMTC
29	75684	Ronkonkoma Station Parking Ride	10/31/2002	NYMTC
30	882218	Haverstraw-Ossing Ferry	9/30/2000	AECOM
31	882282	Yonkers Intermodal Center	10/31/2002	NYMTC
32	MNRFLEET	MNR Service with existing Fleet	12/30/1999	AECOM
33	8T-LOT14	Exit 14 Park and Ride Lot	10/31/2002	NYMTC
34	8T-LOTJ	Palisades Center Lot J Park and Ride	10/31/2002	NYMTC
35	8TLOT14	EXIT 14 PARK AND RIDE LOT	2002	NYMTC
36	8TTOR91	TOR #91 EXPRESS	2002	AECOM
37	8TLOTJ	PALISADES CENTER LOT J PARK AND RIDE	2002	NYMTC
38	OLFERRY3	PORT JEFFERSON, NY- BRIDGEPORT, CT FERRY	2002	NYMTC
39	L025L	Westbury Parking Rehab	2000	NYMTC

4 IMPROVED BPM APPLICATION PROCEDURES

The set of improvements to BPM application procedures done as part of the Update 2002 work are described in this section:

- Revised External (Auto) method - *base year and forecast*
- Bus Pre-Loads used in the highway assignment process
- Revised Multi-class assignment procedures
- Elimination of the Adjustment-to-Counts base year and Adaptive future year option for highway assignments

4.1 EXTERNAL AUTOS TRAVEL MODEL

The External Autos model component of the original BPM was developed using limited intercept and license plate / mail-back origin-destination survey data collected at twelve (12) external station locations within New York State on the study area boundary (Orange, Rockland, Putnam and Dutchess counties).

As part of the BPM re-calibration, using new tools (“critical link”) not previously available in the earlier versions of TransCAD for multi-class highway assignment, it was discovered that the external auto application model was producing an excessive number of trips on major crossings, including the Manhattan bridges. This appears to have been the result of the sample limitations and biases in the survey data that resulted in very long and unrealistic trip lengths for many modeled trips passing through the external stations of the model area. As result, it was determined that a major complication in the original calibration of the BPM had been the substantial, but undetected problems in the external auto model, produced excessively long trips and contribution to total Vehicle Miles of Travel (VMT).

As part of the BPM 2002 Update, this problem was addressed by:

- Re-organizing the multi-class highway assignment procedure to isolate External Auto flows as a separate table, previously combined with SOV’s as part of the pre-assignment trip table building process.
- Re-estimating a base year 2002 external auto origin-destination trip table, using newly developed external vehicle trip volumes at major river crossings (bridges and tunnels) where origin-destination data were available to estimate these volumes.
- These estimates of external trips were then used in the matrix adjustment-to-counts procedure to yield a revised flow matrix for just this external travel component that served as the base year external auto trip table in the multi-class assignment procedure.
- The external auto flow forecasting procedures in the BPM were then replaced by a simple iterative-proportional fitting procedure that yields future year external travel demand flows, based on exogenously provided external station volumes (from NYSDOT and NJDOT), and the changes in zone level employment and population within the model area.

As shown in Table 4.1, the results of these improvements were dramatic in the reduction of the external auto contribution to VMT in the core of the region, as shown for four of the New York

City boroughs. As discussed in *Section 5* of this report, this was a major change that allowed for an improved and simplified re-calibration of the BPM, and the elimination of the second stage general adjustment-to-counts calibration that was previously required to obtain reasonable validation statistics for model volumes to observed counts.

Table 4.1 External Auto VMT as Percent of Total VMT – All Vehicles: Four New York City Boroughs

With BPM Externals Model - Original

	1 FC 1,11,12,20	2 FC 2,6,14,16	3 FC 7- 9,17,19	Total
1 MANHATTAN	27%	9%	7%	17%
2 QUEENS	22%	4%	3%	15%
3 BRONX	48%	8%	8%	36%
4 BROOKLYN	39%	6%	7%	19%

With BPM Externals Model - Revised with 2002 Update

	1 FC 1,11,12,20	2 FC 2,6,14,16	3 FC 7- 9,17,19	Total
1 MANHATTAN	4%	2%	1%	3%
2 QUEENS	3%	1%	0%	2%
3 BRONX	14%	3%	3%	11%
4 BROOKLYN	7%	1%	1%	3%

4.2 BUS PRELOADS FOR HIGHWAY ASSIGNMENT

4.2.1 Bus Coding / Transit Route Correspondence to BPM Highway Network

As part of the BPM 2002 update, the manual coding relating the bus route ID’s in the BPM transit network to the highway network was completed in two stages according to the procedures described in this section of the report.

The objective of enhancement to the BPM task was to improve the standard BPM highway assignment procedure to incorporate the pre-loading of buses on roadways in the network, where bus volumes are substantial and should affect link capacity in the loading of the private and commercial trip vehicle tables that are produced by the BPM models and are assigned using the TransCAD multi-class equilibrium assignment method (MMA). Work was required to add this capability to the BPM due to the lack of a direct linkage between the line layers that comprise the highway and transit networks. The bus network is coded as TransCAD route systems built from the line segments (segment ID’s) of the underlying “ALLinks” detailed street and road base map, that is largely derived from the 1990 Census Tiger line files. The BPM highway network is also a TransCAD line layer, one that has been shaped and fit to register very closely with the underlying

ALLinks (for New York counties) and transit routes layers, but it is not directly linked to either by common link ID's that could be used to pass network data between the two – e.g. number of bus vehicles per hour to the highway links, or assignment link speeds to the transit networks for the purpose of adjusting bus speeds to reflect congestion.

4.2.2 Methods Developed

Various methods were formulated and tested to can create a data linkage between the transit and highway networks to facilitate pre-loading of buses for specific alternative BPM transit networks. Automated tagging and joining procedures were developed and implemented in TransCAD.

Specific steps required as part of the implementation of the Bus Pre-Load capability in the BPM included:

- Developing and testing alternative methods to create a data linkage between the transit and highway networks to facilitate pre-loading of buses specific to alternative BPM transit network.
- Formulating and determining the criteria such as minimum bus volume thresholds for incorporation of the bus-on-highway network linkages to be implemented.
- Development of new GISDK scripts that implement the transit / highway linkages, the extraction of transit network line coding “buses per hour” and the filling of bus-preload volumes on the pre-assignment period BPM highway network.
- Modification of the current BPM network building (NETPREP) and highway MMA highway assignment programs to accommodate bus-preloading, and the integration of these within the CENTRAL user interface of the BPM.
- These revised assignment procedures have been tested with the current base year 1996 and assignments produced to compare to current calibration without bus pre-loads. The procedures have also been tested with 2020 No-Build and Plan forecasts, and compared with prior forecasting results for these scenarios.

4.2.3 Transit/Highway Correspondence File

First, it is necessary to build a correspondence file between the transit line layer and the base highway network. This was done using the TransCAD tagging procedure. For the most part, the two networks are very similar, except that the base highway network contains much more detail for highways and interchanges. Due to the differences in geography, the TransCAD tagging procedure often failed to tag the correct transit line layer ID to the highway network. Therefore, many interchanges, highways, and service roads needed to be edited manually and assigned the correct transit line layer ID.

Another issue is directionality. Most transit line layer links are given a TransCAD direction of zero (0) (meaning a two-way link), even if in reality the link is one-way. There is also no way of knowing if a link is AB or BA (if the flow goes “with” or “against” the topology of the link). Therefore, we have calculated a “true” direction for each link in the highway network and transit line layer by calculating the arctangent of the difference of the beginning and end node longitudes and latitudes. This system will work for all links, as long as they do not bend back on themselves. Before, two new directional fields have been added to the highway network and transit line layer.

When the true directions are the same for highway and transit, then all AB Bus flow from the transit line layer is assigned to the highway network as an AB Bus Preload Flow. If the true directions are different, then the AB Bus flow from the transit network is assigned as the BA Bus Preload Flow in the highway network.

In the base highway network, there are currently 8 additional fields used for these edits. The Table 4.2 below describes each of these new fields:

Table 4.2 BPM Highway / Transit Correspondence File Structure

Attribute	Description
TransitID	Tagged Transit ID
TransitLinkCode	1--Unsure of Correct ID 9—Currently tagged with a Bus Flow but should have none (Transit Link ID)--The Correct Transit ID
Direction	Vector Direction of link
Direction2	Vector Direction of link
TransitID2	Additional Transit Link Ids that should be associated with this link
TransitID3	Additional Transit Link Ids that should be associated with this link
TransitID4	Additional Transit Link Ids that should be associated with this link
TransitID5	Additional Transit Link Ids that should be associated with this link

Adding bus preloads to the highway network is a 4-step process. First, the correspondence file described above must be created, since the highway and transit network are not identical. However, this is a step that only needs to be performed once, with updates whenever a new bus link is coded or a link in the highway network with a bus preload on it has been edited. Next, the bus volumes in each direction need to be calculated from the transit route system headway. With the correspondence file, these bus volumes are then appended to the highway network during the standard BPM network processing step (NETPREP) that builds the Period networks for use in the TransCAD BPM highway assignment, with bus vehicles preloaded.

Table 4.3 shows the bus route / highway link correspondence that were developed in two stages.

Table 4.3 BPM Highway Network – Bus Route Correspondence Coding

COUNTY	Previous Task Order C-1A		Current Task Order C-1G		Total: Both Task Orders	
	Number of Links Coded	Total Bus Flows Added	Number of Links Coded	Total Bus Flows Added	Number of Links	Total Bus Flows
1 Manhattan	2,436	2,245,765	1,584	452,236	4,020	2,698,001
2 Queens	3,472	1,550,782	1,708	-28,839	5,180	1,521,943
3 Bronx	2,282	1,070,774	1,054	167,849	3,336	1,238,623
4 Kings	2,971	1,329,259	2,043	179,889	5,014	1,509,148
5 Staten Island	929	334,716	346	44,195	1,275	378,911
6 Nassau	3,580	378,191	882	5,409	4,462	383,600
7 Suffolk	4,400	228,386	809	2,384	5,209	230,770
8 Westchester	0	0	3,625	264,472	3,625	264,472
9 Rockland	0	0	900	52,789	900	52,789
10 Putnam	0	0	445	4,024	445	4,024
11 Orange	0	0	1,248	17,054	1,248	17,054
12 Dutchess	2	0	1,181	48,703	1,183	48,703
13 Fairfield	0	0	3,596	226,346	3,596	226,346
14 Bergen	0	0	1,173	198,862	1,173	198,862
15 Passaic	0	0	658	85,845	658	85,845
16 Hudson	0	0	1,120	384,234	1,120	384,234
17 Essex	0	0	1,343	467,821	1,343	467,821
18 Union	0	0	579	71,953	579	71,953
19 Morris	0	0	684	20,620	684	20,620
20 Somerset	0	0	401	9,394	401	9,394
21 Middlesex	0	0	584	74,429	584	74,429
22 Monmouth	0	0	621	38,186	621	38,186
23 Ocean	0	0	325	8,829	325	8,829
24 Hunterdon	0	0	271	512	271	512
25 Warren	0	0	224	0	224	0
26 Sussex	0	0	222	1,832	222	1,832
27 New Haven	0	0	3,476	226,982	3,476	226,982
28 Mercer	0	0	1,125	42,130	1,125	42,130
Total	20,072	7,137,873	32,227	3,068,140	52,299	10,206,013

4.3 MULTI-CLASS HIGHWAY ASSIGNMENT

The revisions to the general equilibrium multi-class highway assignment procedure used in the BPM primarily relate to the changes described above in the External Auto travel model. In order to report the assigned external model flows separately for each link in the network, it was necessary to re-structure the six table matrix of vehicle flows used in each of the four period highway assignment of the BPM as shown in Table 4.4. This permitted the matrix-to-count estimation of the base year external vehicles flows, and allows for easier and more efficient review of this travel component in calibration and forecast results, provided by the TransCAD “Critical (or Select) Link” reporting option.

Table 4-4 Revised Structure of BPM Highway Vehicle Trip Tables

Table in Highway Vehicle Trip Table	Original BPM - Vehicle Class/Source	Revised BPM - Vehicle Class/Source
Table 1	SOV (w/Externals)	SOV's only
Table 2	HOV2,	HOV2 (w/ Taxis)
Table 3	HOV3+,	HOV3+
Table 4	Taxi,	Externals (auto)
Table 5	Trucks,	Trucks
Table 6	Other Commercial / Vans	Other Commercial / Vans

5 RE-CALIBRATION AND VALIDATION OF BPM 2002

5.1 REVIEW OF BPM 1996 METHODS AND VALIDATION

As part of preparing the BPM for conformity analysis, a re-calibration of the BPM to a Base Year 2002 was done based on the revised set of input data, new calibration targets, and improved application procedures discussed in the preceding sections of this report.

While constrained by schedule commitments for the pending Conformity Analysis, a re-calibration process was designed in light of several considerations:

- Response to review and comments by members of the BPM Users Group, a group comprised of transportation agencies, consultants, and other interested parties, of the 1996-based BPM calibration methods and validation statistics described in the first draft (June 22, 2004) of the *BPM General Final Report*.
- Recognized opportunities for improved calibration, without a direct adjustment-to-counts and companion adaptive assignment procedure, made possible by substantial corrections to the external autos travel model and trip tables (*See Section 4.1*).

With limited time available, the completion of the updated data and modified procedures, the re-calibration effort was done in the period between mid-July through November 2004, and in January 2005 in four “stages”:

- *Stage 0*: Base Year Update 2002: Networks and Data (only) – results of model runs without any re-calibration of core model or assignment procedures – July 13, 2004 with RC-BPM-0.
- *Stage 1*: Initial Re-Calibration – completed September 27, 2004 with RC-BPM-12E.
- *Stage 2*: Continued Re-Calibration – continuation of effort based on a re-assessment of the time available for preparation for the pending Conformity Analysis – completed November 11, 2004 with RC-BPM-43F.
- *Stage 3*: Final Re-Calibration effort, resumed as a result of final and revised Base Year 2002 Socioeconomic Data (SED) received in mid-January 2005, and corrections to the base year – completed January 29, 2005 with RC-BPM-55G-5C.

A detailed accounting of the calibration process, test by test, is provided in Table 5.1 – Log of BPM Re-Calibration Runs.

5.2 RE-CALIBRATION PROCESS AND PRINCIPLES

The current re-calibration process was guided by the following principles:

- Focus on Highway Validation, the most critical for the accurate generation of travel forecasting inputs to air quality analysis.
- Aim for a calibration that is generally on the “low side” of observed or estimated counts, accounting for the missing components of travel not modeled in the BPM (e.g. visitors, airport access, police and other fleet vehicle activities).
- Obtain more a uniform regional pattern of volume-count measures with a focus on inter-county screenlines and major crossings (bridges and tunnels) in the region.

- Simplify the original calibration structure of the BPM by substantially reducing the number of applied “constants”.
- Simplify or eliminate the trip table adjustment-to-counts and adaptive forecasting assignment process.

As discussed in prior sections of this report, the re-calibration of the BPM used:

- A new set of various traffic counts / Screenline counts update 2002
- Transit counts / Hub-bound 2002
- Journey-to-Work flow data at the district level from the CTPP 2000
- HIS general statistics for average journey length by purpose, and modal split by purpose and geography

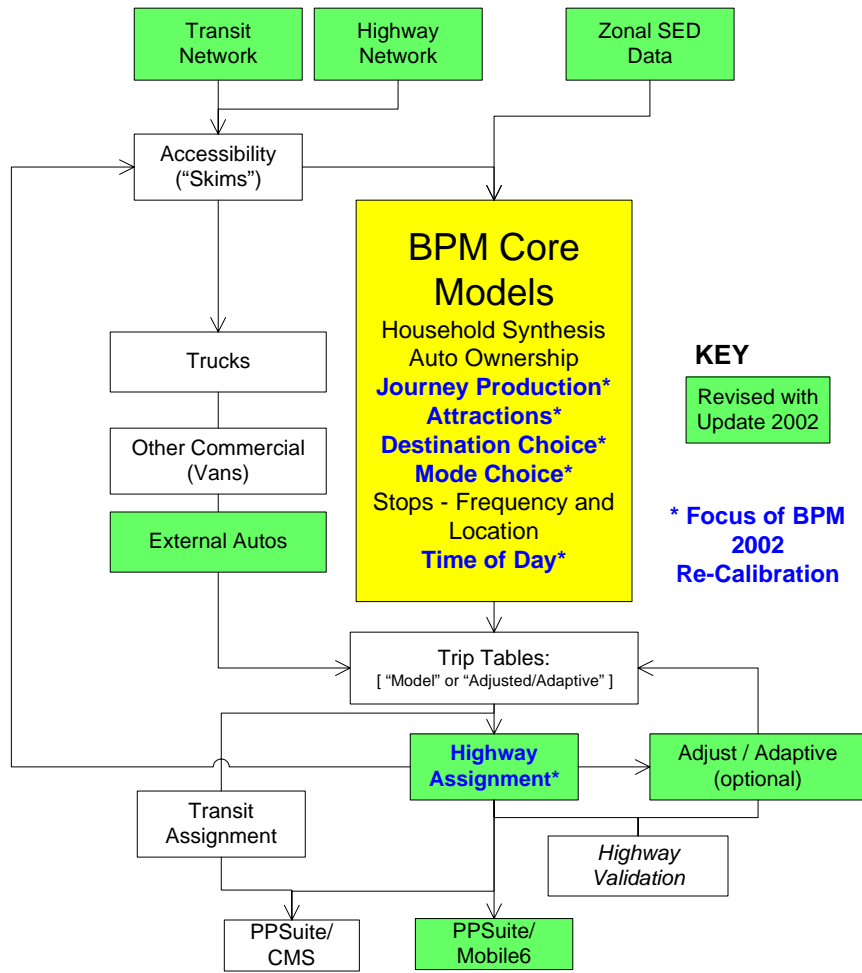
The following general rules were applied in the calibration procedure in order to preserve the behavioral properties and elasticities of the estimated model system to the maximum possible extent:

- Only Alternative Specific Constants (ASC) and several general scaling parameters are adjusted:
 - Behavioral properties and elasticities of the original model are preserved;
 - Aggregate targets are matched;
- Minimal possible adjustments spread over the maximum possible number of segments – avoid over-specification;
- Adjustments were made only if there was a definite indication on the same type of problem from different sources of information:
 - Behavioral sense and logical explanation;
 - From top (major screen-lines) to bottom (individual facilities);
 - Iterative procedure with incremental small adjustments at each iteration and re-evaluation for the next iteration;
- Adjustments were made based on an iterative procedure with incremental small shifts at each iteration and careful re-evaluation for the next iteration; and
- Adjustments were based on behavioral factors and logical explanation of the original source of discrepancy; no automatic adjustment procedures were applied either for the choice models or assignment (post-model trip table adjustment to counts).

As shown in Figure 5-1, the re-calibration of the BPM focused on simplifying and revising the parameters for the core models model, in many cases removing highly specified constants as the result of “unmasking” and correcting the external travel flows on the network:

- Journey Production
- Time-of-Day
- Distribution
- Mode Choice
- Highway Assignment

Figure 5-1 General Structure of the BPM and Focus of BPM 2002 Re-Calibration



The approach applied relied on the following use of the available data to support the re-calibration:

- Comparison of the model outcome to the aggregate targets:
 - Traffic & transit counts
 - JTW CTPP
 - Aggregate HIS statistics
- Identification of the source of the problem:
 - Journey generation
 - Destination choice
 - Mode choice
 - TOD choice
 - Assignment (route choice)
- Incremental shift of the related alternative-specific constants by manual review and adjustment

Within the actual time and resource constraints, the BPM 2002 Re-Calibration considered or addressed the following aspects of the regional travel demand modeling system as described in sub-sections 5.2

5.2.1 Initial Core Model Adjustments Review / Revision

There is a need to evaluate the NYMTC 1996 set of parameters adjustments, particularly those that were created with auto-calibration, simply and manually reset where required:

- Journey Production (HAJ) – scaling factors generally reset to 1.0 or increased from 1996 to account for improved (reduced) externals trip in assigned flow.
- Destination Choice:
 - attractions – minimal use or changes to 1996 calibration scaling factors;
 - distance scaling – linear and exponential terms – adjusted with respect to conforming model tour lengths to the survey estimates; and
 - district-to-district constants – use of these substantially reduced from the 1996 calibration, both in terms of the number of district-to-district interchanges with non-zero constants, and in the magnitude of the constant where applied.
- Time of Day (TOD) – period balancing, adjustment to the diurnal time maps derived for the RT-HIS data by purpose and mode, and Manhattan/Non-Manhattan destinations, based on a focus on volumes and counts by time period on major crossings.
- Mode Choice – review and remove most geographically segmented ASC.

A full listing of the BPM core model constants used as parameters in the BPM 2002 Re-Calibration is found in Appendix B: BPM 2002 Calibration Parameters.

5.2.2 Highway Network Characteristics

- Corridor and approaches to crossings with problematic volume / count deviations, were checked and the following coding problems were addressed: disconnects, missing links, lanes, etc. that create unreal bottle-necks. Problems were found at the Brooklyn Bridge and were addressed.
- Adding real BPM link attribute data was considered– like Signal Density – taken from LITP 2000 network for geo-LI, from SIAN for State Island, from “String Diagrams for Union County. This would have refined the PLT types created by NETPREP and would have refined the capacities and speeds used. This approach was, however, determined to be beyond BPM 2002 update resources.
- In addition, toll-both coding and use of PLT Type 1 – for all or selected toll plaza – in NYMTC network, as well as in the PA versions were considered. However, we determined this step to be beyond BPM 2002 update resources as well.

5.2.3 Counts – for Major Regional Crossings

- “Typical” fall weekday values in screenline database were double checked, but no changes were required.
- Vehicle classification counts – % auto, truck, other commercial, non-revenue – for the PANY/NJ crossings were compiled and reported as part of the validation. Vehicle class data for other roads and crossings, however, were not available for use in the 2002 update.

5.2.4 Trip Table Evaluation

- AM peak period trips (or work-tours) were compared with CTPP home-to-work flows – county to county level – especially for Manhattan, Queens, Brooklyn, Richmond and Union counties. Flows from the 2002 BPM transit trip tables were extracted and analyzed with respect to Hub-Bound sectors cordons as primary basis for assessing mode choice validation.

5.2.5 Highway Assignment Tests

- PB Consult began a focused calibration effort on the AM period and by directional flows, which included a Systematic / Region-Wide focus aimed at shifting volumes from lower to higher facility types. We wanted to test alternative VDF/BPR parameters, however, this was determined to not be needed and beyond BPM 2002 update resources.
- Adjustment to the weighting of the distanced-based component of the generalized costs impedance in the assignment path-building procedures were considered, but no changes were made because it was determined that they were not needed.

5.2.6 Crossings and Tolled Facilities

- Verified VOTs in GLC assignment path-building are consistent with mode choice model estimated parameters (relationship of coefficients on time and costs variables). Consider sensitivity test on the value of time to improve the balance of toll/free competing East River crossings. To be done in supplemental effort by NYMTC.
- Considered revising how HOV costs are applied (i.e., remove scaling by # of occupants), but retained current method of scaling costs by number of occupants.
- Considered computing “average daily” toll – weight average by payment type/discounts instead of “cash” value as now coded would generally reduce the toll costs. Determined to not be needed and beyond BPM 2002 update resources.
- Full PA type plaza coding to fit with revised multi-class types (by payment type). Determined to not be needed and beyond BPM 2002 update resources.
- Corridor / Crossings – a balancing of volumes across routes, with limited use of link-specific review and adjust of capacities (ADJCAP) and initial assignment speeds (ADJSPD).

Table 5.1 Log of BPM Re-Calibration Runs

BPM 2002 - Stage 1 Re-Calibration - Log of Tests / Runs

Run Name	Date	Description of Model Revision Test	Comment	Input Skims
1996	3/21/02	Base Year Update 1996 - Model (020321)		
RC-0	7/13/04	Network / Data Update Only - Without Re-Calibration		
RC-1	7/31/04	HAI Production Factors (1) - Generally, increases in maintenance & discretionary consistent with possible under-reporting in HIS		
RC-2	8/12/04	HAI Production Factors (2) - Further increases in targeted counties.		
RC-3	8/23/04	HAI Production Factors (3) - Further adjustments in targeted counties.		
RC-4	9/5/04	Re-Calibration Test - MDSC - with only intra-county k-factors		
RC-5		<i>n / a (skipped)</i>		
RC-6	9/11/04	Selective CO_IJX.prn Revisions		
RC-7	9/14/04	TOD Adjustment - (TOD 1) - Modification of time maps - generally aimed at reduce AM volumes		
RC-8	9/15/04	TOD Adjustment - (TOD 2) - Modification of time maps - aimed at general 4 period balancing of trips		
RC-9	9/16/04	TOD Adjustment -- (TOD 3) - Modification of time maps - aimed at 4 period further balancing of trips, K-Factors for Westchester and Rockland		
RC-9 (B)	9/17/04	Network Updates--Manhattan and Queensboro, Bus Preloads	Assign only	
RC-10	9/17/04	MDSC with HOV Skims (Utilities enabled)		
RC-10 (B)	9/22/04	Network Updates--Bridges and Ramps (Network B)	Assign only	
RC-11	9/23/04	Mode Choice - Adjustments for Hub-Bound Sector Transit Targets 1 (2002)		RC-10
RC-11 (C)	9/24/04	Mode Choice - Adjustments for Hub-Bound Sector Transit Targets 1 (2002)	Assign only	
		Network Updates--Bridges and Ramps (Network C)		
RC-12D	9/26/04	Network Updates--Bridges and Ramps (Network D)		RC-11
		Mode Choice - Adjustments for Hub-Bound Sector Transit Targets 2 (2002)		
		Mode Choice - SOV-HOV shifts for NJ-NY Interstate (PA PVV data)		
RC-12D_A1	9/27/04	Mode Choice - Adjustments for Hub-Bound Sector Transit Targets 2 (2002)		
RC-12D_A2	9/27/04	Highway Assignment Parameters - Adjusted (reduced) Capacity for AreaType 1,2,3	Assign only	
		A1, plus VDFMM5 - increased BPM alpha coefficients for most PLTs	Assign only	
RC-12E_A2	9/27/04	same as RC-12D_A2, except 4 minor base year update projects added	Assign only	

Table 5.1 Log of BPM Re-Calibration Runs (continued)**BPM 2002 - Stage 2 Re-Calibration - Log of Tests / Runs**

Run Name	Date	Description of Model Revision Test	Comment	Input Skims
RC-13E	10/2/04	Mode Choice - Remove All Geographic Specific (Indexed) Constants (M_MSC#.csv's)		RC-12
RC-14E	10/4/04	Tour-Length constants in MDC #1 (distfact#.prns) - aim for 5-10% inc in VMT		RC-13
RC-15E	10/5/04	Tour-Length constants in MDC #2 distfact#.prns)		RC-14
RC-16E	10/6/04	Tour-Length constants in MDC #3 distfact#.prns)		RC-15
RC-17E	10/7/04	Tour-Length constants in MDC #4 distfact#.prns)		RC-16
RC-18E	10/8/04	Tour-Length constants in MDC #4 distfact#.prns) - Updated Skims only		RC-17
RC-19E	10/11/04	Tour-Length constants in MDC #4 distfact#.prns) - Updated Skims only		RC-18
RC-20E	10/12/04	Tour-Length constants in MDC #5 distfact#.prns)		RC-19
RC-21E	10/14/04	Haj Production Factors (4) - reductions		RC-20
RC-22E	10/15/04	Haj Production Factors (5) and Tour-Length constants in MDC #6 distfact#.prns		RC-21
RC-23E	10/16/04	Haj Production Factors (5) and Tour-Length constants in MDC #6 distfact#.prns - Updated Skims only		RC-22
RC-24E	10/18/04	Haj Production Factors (6) and MDC attraction factors (mid-town Manhattan discretionary) and K-Factors for Kings-Queens		RC-23
RC-25E	10/19/04	1. queens-Bronx-kings revision of intrazonal and k-factors. 2. Manhattan attraction for low-income, medium-income, and discretionary. 3. Putnam and Rockland k-factors		RC-24
RC-26E	10/20/04	1. mode choice adjustments and additional k-factors (Manhattan, queens, Bronx)		RC-25
RC-27E	10/21/04	1. mode choice adjustments and additional k-factors (Manhattan, queens, Bronx, Rockland and Westchester) 2. low and med-income work productions 3. distance adjustment for Manhattan, queens and Brooklyn		RC-26
RC-28E	10/22/04	1. mode choice adjustments and additional k-factors (Manhattan, queens, Bronx, Rockland to everything south)		RC-27
RC-29E	10/23/04	1. if Rockland still 20+ (then make factors = -1, if it is less than 20+ adjust it accordingly) for daily then further k-factors for Rockland to everything south)		RC-28
RC-30E	10/24/04	Same as RC-29E, recycled skims		RC-29
RC-31E	10/25/04	1. Crossings file for MDSC changes for Manhattan, Brooklyn, Queens, Nassau, and Suffolk. 2) tod factors 3) Brooklyn-queens k-factor penalty increased 4)minor adjustment for mode choice		RC-30
RC-32E	10/27/04	k-factors and haj		RC-31
RC-33E	10/28/04	1)k-factors adjusted for Rockland (remove to new York, stronger negative to new jersey, stronger positive to Westchester), Putnam (intracounty increased), manhattan (work purposes decrease intra county to zero) 2) TOD factors 3) Haj adjust queens for purpose 6 and 7 4) DIST factors for work for new jersey		RC-32
RC-34E	10/29/04	Haj production factors, MDC K-factors, mode choice constants, and distance factors.		RC-33
RC-35E	10/30/04	Recycled Skims from RC-34E		RC-34
RC-36E	11/1/04	New K-factors for New Jersey to all counties North, and additional TOD factor changes.		RC-35
RC-37E	11/2/04	Slight K-factor adjustment		RC-36
RC-38E	11/5/04	Adjusted mode choice coefficients (attached) and also enhanced K-factors between Westchester (10) and Fairfield (15) in both directions (addition of +0.5 to whatever it is now for all purposes).		RC-37
RC-39E	11/6/04	Recycling of skims from RC-38E		RC-38
RC-40E	11/8/04	K-factors adjustment for Fairfield, Westchester, Manhattan and geographic Long Island		RC-39
RC-41E	11/9/04	K-factors update for work purposes only, and distance factors update		RC-40
RC-41F	11/10/04	CAPMOD update, only network changes, same trip table as RC-41E		RC-40
RC-42F	11/10/04	CAPMOD Update only, slight k-factors adjustment and recycling skims from RC-41E		RC-41F
RC-43F	11/11/04	Small k-factor refinement, mostly New Haven to Bronx and Manhattan. Also, modifications to the SPDCAP file: Reduced bridge (PLT=2) and Tunnel (PLT=3) capacities, and increased FFSpeed for bridges in higher (less dense) AreaTypes.		RC-42

Table 5.1 Log of BPM Re-Calibration Runs (continued)**BPM 2002 - Stage 3 Re-Calibration - Log of Tests / Runs**

Run Name	Date	Description of Model Revision Test	Comment	Input Skims
RC-45G-5	1/14/05	New SED files delivered from Urbanomics (1/11/05): 2000-2030 Series per PFAC Approved Forecasts (Sept. 2004). Ran HAJ to generate new trips file.		RC-44G
RC-46G-5	1/16/05	Recycled Skims Only		RC-45G-5
RC-47G-5	1/17/05	Recycled Skims Only		RC-46G-5
RC-48G-5	1/18/05	Recycled Skims Only		RC-47G-5
RC-49G-5	1/19/05	Updated Mode Destination Choice Coefficients		RC-48G-5
RC-50G-5	1/20/05	Updated Mode Destination Choice Coefficients and K-Factors		RC-49G-5
RC-50G-5	1/21/05	Updated Mode Destination Choice Coefficients and K-Factors, specifically for Orange and Ocean Counties.		RC-50G-5
RC-52G-5	1/22/05	Updated Mode Destination Choice Coefficients, Distance Factors and K-Factors: More trips from Manhattan, Queens and Brooklyn to Everywhere. Less long trips from Ocean and Monmouth to Richmond, Manhattan and Brooklyn. More trips from Putnam to Westchester. More trips from Orange to Rockland, Westchester and Bronx.		RC-51G-5
RC-53G-5	1/22/05	Minor updates for Mode Choice with significant updates for Destination choice coefficients.		RC-52G-5
RC-54G-5	1/23/05	Recycled Skims Only		RC-53G-5
RC-55G-5	1/24/05	Updated Staten Island attraction factors for purposes 2 and 7. Minor mode choice adjustment (less transit). K-factors updated to and from Staten Island. Also, updated productions of discretionary journeys from Queens and Bronx. Re-Ran HAJ with these new inputs		RC-54G-5
RC-55G-5B	1/27/05	Updated BPM Highway Network to correct network problems		RC-54G-5
RC-55G-5C	1/29/05	Updated BPM Highway Network to correct further network problems		RC-54G-5

5.3 VALIDATION RESULTS

The validation results for the updated and re-calibrated BPM 2002 are reported in this section of the report with respect to three general categories of evaluation:

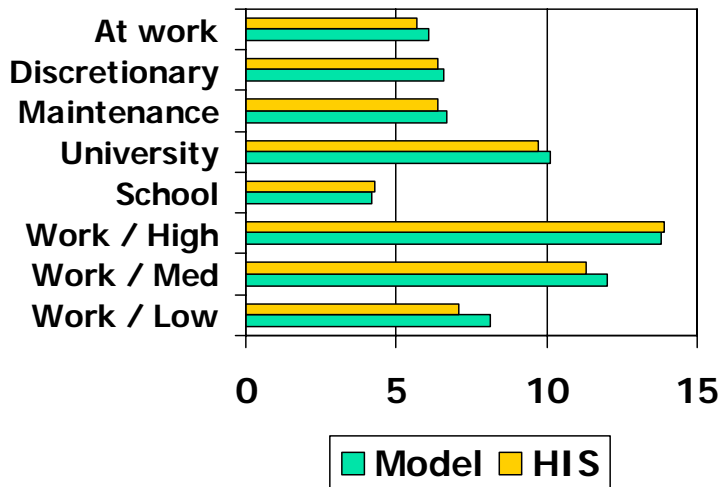
- BPM core choice models
- Highway assignment results
- Transit – flows across Hub-Bound Sectors

5.3.1 Core Choice Models

As discussed in Section 5.2 above, a major simplification and reduction in the calibration factors applied to the BPM core models was implemented as part of the BPM 2002 update. The full set of calibration factors for the core models are found in Appendix B.

With an emphasis in this re-calibration effort modeled on highway inputs to the air quality analysis, regulation of average travel lengths was important given their direct relationship to Vehicle Miles of Travel (VMT). The correspondence of modeled Base Year 2002 tour lengths to the RT-HIS observed estimates are shown by travel purpose in Figure 5.1.

Figure 5.1 Tour Lengths – BPM Re-Calibrated and RT-HIS Observed



Additional and more detailed reporting of the BPM 2002, compared to the original BPM 1996 results by each of the core model component individually is found in Appendix C. BPM 1996 and 2002 – Core Model “Score-Card” Reports.

5.3.2 Highway Assignment Validation

The calibration results presented in this section summarize the BPM validation results for the highway assignments for the BPM 2002 Update and Re-Calibration. These are presented with respect to the acceptability and validation criteria that were developed for the Air Quality Inter-Agency Consultation Group (AQICG) developed for the original BPM Base Year 1996, in conjunction with the Project Advisory Committee (PAC), primarily based on criteria from published FHWA guidelines.

The original 1996 BPM calibration was a two staged calibration process:

- “*Base*” or “*Model*” results - reflecting calibration of the full model chain of the core BPM models prior to the assignment step, including the auto-ownership, journey production and attraction, destination and mode choice, and time of day models, and
- “*Matrix Adjustment to Counts*” - post-model direct adjustment of the base year or model vehicular trip tables to available counts made in an iterative procedure of assignments, volume and count skimming, and OD matrix flow adjustments to minimize deviations between assigned flow and counts. The procedure produces an adjusted set of base year tables and adjustment factors (for forecasting future years) for each vehicular trip table used in the BPM multi-class assignment -- SOV auto, HOV2, HOV3+, Taxi, Trucks, and Other commercial vehicles. This method is produced the adjustment factors used as part of the “Adaptive” assignment process of the BPM when used for future year forecasts vehicular trip tables in the original Base Year 1996 BPM.

As part of the 2002 BPM update and re-calibration, it was determined that an adequate and reasonable level of validation with respect to highway volume counts could be achieved without imposing the second matrix adjustment stage used in the original BPM Base Year 1996 calibration. Consequently, the validation statistics presented here reflect assignment to the regional highway network of the “base” or “model” only set of trip tables. Also, as a result, future year forecasts with the updated BPM are produced without the factoring of forecast trip tables that was previously implemented as part of the adaptive assignment process. As discussed in *Section 5.2* of the report, this is a significant improvement in the BPM, resulting in more stable and realistic forecasts of changes in origin-destination flows, and network simulated volumes and travel times.

The evaluations of the BPM assignments with respect to traffic counts are based on comparison of model volume flows with respect to the updated set of regional Year 2002 screenline counts that are described in *Section 2.2*. The “MATRIX” database of counts developed by NYSDOT State Route System in the New York counties of the model area for the 1996 BPM validation, were not update to be used as part of the BPM 2002 Re-calibration.

The results in the following tables in this section are summarized at several different levels of aggregation, including:

- *All network links* - 37,000 with centroid connector links excluded. Note that while there is complete representation of principal roadways in the BPM network (Major Arterials and above), the some minor arterials are not represented, and only a small portion of collectors, and local streets are included.

- *Screenline Data* – the three tier system of cutlines in the NY 12-county area, for which a database of actual and synthesized, hourly by direction, but without vehicle classification counts – 2,266 links in the BPM highway network in the updated 2002 screenline database.
- *Inter-County Screenlines* – the first tier of Screenline database counts on all roads crossing county boundaries.
- *Major River Crossings* – for each bridge and tunnel connecting New York and New Jersey (Interstate crossings), as well all Manhattan crossings and upper Hudson River bridges in the model region.

In the following set of tables, measures of the model volume / count deviation are shown using standard FHWA criteria. The measures of validations are shown for road classifications listed above, and by Volume Group and Functional Class group.

Additional and more detailed highway validation results are also found in Appendix D: Detailed Highway Validation Results.

Table 5-2 Inter-County Screenlines – Base / Model Calibration – 2002 Update

Inter-County Screenline	Weekday				By Time Period: % Diff			
	Counts	Assigned	Difference	% Diff	AM	PM	MD	NT
1 Manhattan-Queens(MNEW03CQN)	354,012	359,263	5,251	1%	-7%	13%	9%	-11%
2 Manhattan-Kings (MNEW02CBK)	347,610	354,088	6,478	2%	6%	23%	13%	-28%
3 Manhattan-Bronx (MNEW04BX)	736,854	713,158	-23,696	-3%	-5%	7%	1%	-16%
4 Manhattan - New Jersey (NJEW01CMN)	511,570	474,297	-37,273	-7%	-7%	-8%	-7%	-7%
5 Queens-Bronx (QNNS06CBX)	227,793	228,868	1,075	0%	-9%	6%	5%	-1%
6 Queens-Nassau (QNEW05CNA)	1,067,679	1,033,712	-33,967	-3%	-8%	8%	-4%	-10%
7 Bronx-Westchester (BXNS05CWE)	675,264	737,618	62,354	9%	7%	14%	14%	-2%
8 Kings-Queens (BKEW07CQN)	804,664	813,013	8,349	1%	-3%	15%	2%	-13%
9 SI-Kings (SIEW04CBK)	212,491	201,733	-10,758	-5%	2%	2%	-5%	-23%
10 SI-NJ (NJEW01CSI)	177,985	202,363	24,378	14%	15%	18%	12%	8%
11 Nassau-Suffolk (NAEW04CSU)	622,574	619,888	-2,686	0%	0%	0%	-3%	3%
12 Westchester-Fairfield (WEEW06SCT)	349,835	324,608	-25,227	-7%	-10%	-7%	-7%	-5%
13 Westchester-Putnam (WENS06CPU)	216,703	208,404	-8,299	-4%	-3%	-8%	-5%	4%
14 Rockland-Westchester (ROEW03CWE)	137,801	115,679	-22,122	-16%	-24%	-8%	-18%	-9%
15 Rockland-Orange (RONS05COR)	173,836	148,943	-24,893	-14%	-11%	-19%	-17%	-5%
16 Rockland-NJ(NJNS01CRO)	323,982	369,959	45,977	14%	14%	18%	17%	4%
17 Putnam-Fairfield (PUEW04SCT)	100,344	122,062	21,718	22%	29%	17%	14%	34%
18 Putnam-Dutchess (PUNS02CDU)	117,655	118,623	968	1%	-3%	-1%	4%	5%
19 Orange-Westchester (OREW04CWE)	18,383	19,597	1,214	7%	9%	20%	8%	-12%
20 Orange-Dutchess (OREW05CDU)	69,688	60,136	-9,552	-14%	-8%	-17%	-17%	-9%
21 Orange-NJ (NJNS01COR)	52,652	55,656	3,004	6%	14%	8%	5%	-4%
22 Orange-Other NY (ORNS03SNY)	152,278	146,862	-5,416	-4%	-5%	-4%	-4%	0%
23 Dutchess-Other NY (NYEW02CDU)	19,266	18,212	-1,054	-5%	-5%	-5%	-4%	-10%
24 Dutchess-CT(DUEW04SCT)	29,629	28,714	-915	-3%	-7%	-1%	0%	-10%
25 Dutchess-Other NY (DUNS03SNY)	30,297	30,628	331	1%	5%	1%	-2%	4%
26 Dutchess-Other NY (NYEW01CDU)	37,774	36,701	-1,073	-3%	2%	-4%	-4%	-7%
Total	7,568,619	7,542,785	-1,073	-3%	-2%	6%	1%	-8%

Table 5-3 Volume Group - 2002 Update Base / Model Calibration – All Screenline Links (only)

Volume Group	BPM Links	Daily Count	Daily BPM Flow	Difference	BPM Deviation % Diff	FHWA Desirable Deviation Range	% of Link within Desired Range	Percent RMSE
1 more than 80,000	57	93,346	75,218	-18,129	-19%	21%	68%	28%
2 70,000 - 79,999	53	74,591	69,118	-5,473	-7%			19%
3 50,000 - 69,999	132	60,093	54,581	-5,512	-9%			29%
4 25,000 - 49,999	461	34,060	33,260	-800	-2%	22%	40%	45%
5 10,000 - 24,999	947	16,024	14,755	-1,268	-8%	25%	34%	57%
6 5,000 - 9,999	372	7,672	8,806	1,134	15%	29%	34%	101%
7 2,500 - 4,999	163	3,750	6,138	2,388	64%	36%	28%	204%
8 1000 - 2,499	60	1,951	4,680	2,730	140%	47%	28%	269%
9 less than 1000 daily	21	689	1,858	1,168	169%	60%	29%	393%
Total	2,266	22,806	21,650	-1,157	-5%			51%

Table 5-4 Functional Class – 2002 Base / Model Calibration – Screenlines (only)

Functional Class	BPM Links	Daily Count	Daily BPM Flow	Difference	BPM Deviation	FHWA Desirable Deviation Range	% of Link within Desired Range	Percent RMSE
1 FC 1,11,12	455	47,990	48,828	838	2%	7%	22%	32%
2 FC 2,6,14,16	1502	18,388	16,521	-1,866	-10%	15%	22%	61%
3 FC 7-9,17,19	285	6,827	6,020	-807	-12%	25%	21%	107%
	2,242	22,926	21,743	-1,183	-5%		38%	51%

Table 5-5 Simple Correlation - Model Volumes and Counts

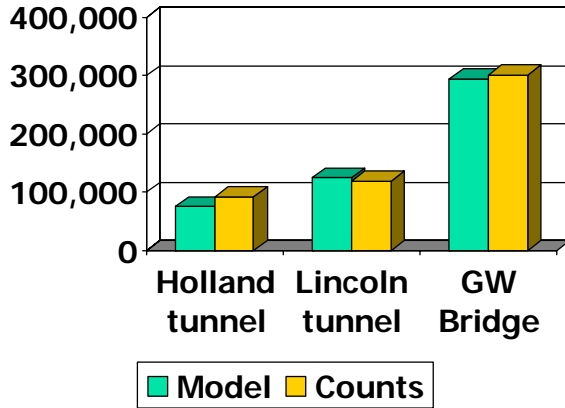
BPM Network Component	Number of BPM Links	Pearsons R-Squared	
			Weighted by Length
Screenline and SRS	678	0.81	0.83
All Screenline	2237	0.82	0.83
All SRS	6696	0.82	0.83
2002 Update: All Screenline	2266	0.84	0.87
FHWA Minimum Correlation of Determination			0.88

Table 5-6 Hub-Bound Sectors and Regional Crossings – Vehicles 2002 Base / Model Calibration

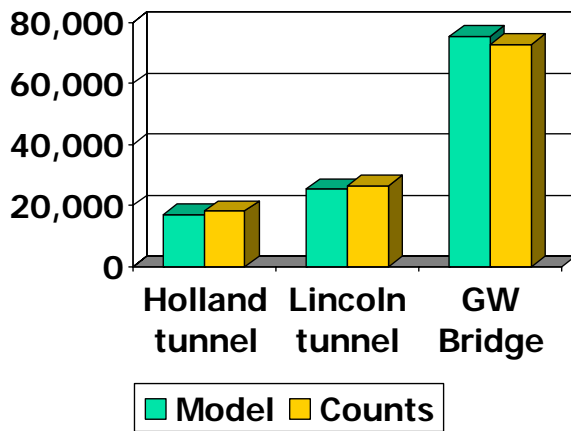
BPM Assignment - Major Crossings		Daily Vehicle Volumes							2002 Update		Deviation - Day	
SECTOR	CROSSING	Count	Total Flow	SOV	HOV	External	Truck	Vans	Total	Percent		
1 60th Street Sector	1 60th Street Sector	707,219	724,068	261,711	409,845	4,906	13,166	27,944	16,849	2%		
	Total	707,219	724,068	261,711	409,845	4,906	13,166	27,944	16,849	2%		
2 Queens Sector	2 Queens Boro Bridge	176,419	145,384	54,172	80,851	46	3,965	6,349	-31,035	-18%		
	3 MidTown Tunnel	82,834	88,198	41,981	43,522	36	769	1,890	5,364	6%		
Total	Total	259,253	233,582	96,153	124,374	81	4,734	8,239	-25,671	-10%		
3 Brooklyn Sector	4 Williamsburg Bridge	103,364	115,427	48,787	61,426	258	1,332	3,425	12,063	12%		
	5 Brooklyn Bridge	121,145	74,928	31,381	37,108	90	2,562	3,787	-46,217	-38%		
	6 Brooklyn Battery Tunnel	56,949	77,342	30,737	43,164	226	845	1,029	20,393	36%		
Total	Total	281,458	267,696	110,904	141,698	574	4,739	8,241	-13,762	-5%		
4 New Jersey Sector	7 Holland Tunnel	91,979	77,250	43,586	25,519	4,697	1,363	1,792	-14,729	-16%		
	8 Lincoln Tunnel	118,796	129,434	70,047	46,119	7,362	2,521	3,102	10,638	9%		
Total	Total	221,465	241,837	191,563	20,959	4,271	10,833	10,222	20,372	9%		
5 George Washington Bridge	9 George Washington Bridge	300,795	267,613	129,660	73,657	37,125	15,812	11,001	-33,182	-11%		
	Total	300,795	267,613	129,660	73,657	37,125	15,812	11,001	-33,182	-11%		
6 Bronx-Manhattan Crossings	10 Bronx-Manhattan Crossings	649,990	573,108	248,567	226,093	39,573	31,210	24,608	-76,882	-12%		
	Total	649,990	573,108	248,567	226,093	39,573	31,210	24,608	-76,882	-12%		
7 Queens-Bronx Crossings	11 Triborogbough Bridge	94,759	125,681	56,030	65,452	390	819	2,136	30,922	33%		
	12 Bronx Whitesone Bridge	123,258	110,329	51,116	31,358	16,433	6,271	4,991	-12,929	-10%		
	13 Throgs Neck Bridge	104,535	118,539	57,132	36,356	7,744	11,209	6,098	14,004	13%		
Total	Total	322,552	354,549	164,278	133,166	24,567	18,300	13,225	31,997	10%		
8 Verrazano Bridge	14 Verrazano Bridge	212,491	201,733	129,051	43,360	15,867	7,936	4,489	-10,758	-5%		
	Total	212,491	201,733	129,051	43,360	15,867	7,936	4,489	-10,758	-5%		
9 NJ-Staten Island Bridges	15 Outerbridge Crossing	76,028	74,416	36,513	10,103	19,168	5,258	3,374	-1,612	-2%		
	16 Bayonne Bridge	21,235	34,727	23,403	7,810	1,126	1,668	720	13,492	64%		
	17 Goethals Bridge	80,722	93,220	50,218	18,758	11,406	8,710	4,128	12,498	15%		
Total	Total	177,985	202,363	110,134	36,671	31,701	15,636	8,221	24,378	14%		
10 Upper Hudson River Bridges	18 Tappan Zee Bridge	137,801	115,679	56,328	20,628	23,029	12,433	3,213	-22,122	-16%		
	19 Mountain Bridge	18,383	19,597	11,179	4,658	2,596	845	320	1,214	7%		
	20 Newburgh Beacon Bridge	69,688	60,136	27,496	9,729	11,085	10,086	1,741	-9,552	-14%		
Total	Total	225,872	195,412	95,003	35,015	36,710	23,363	5,274	-30,460	-13%		
11 I-96 CT-Westchester	21 I-96 CT-Westchester	149,278	144,499	64,833	23,067	38,342	10,645	7,590	-4,779	-3%		
	Total	149,278	144,499	64,833	23,067	38,342	10,645	7,590	-4,779	-3%		

Figures 5-3 Major Crossings - Volumes and Counts

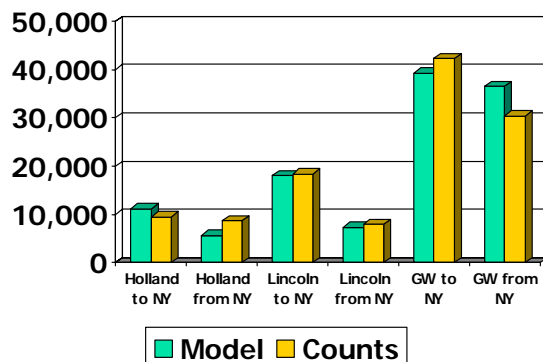
5.3.1 Hudson River Crossings



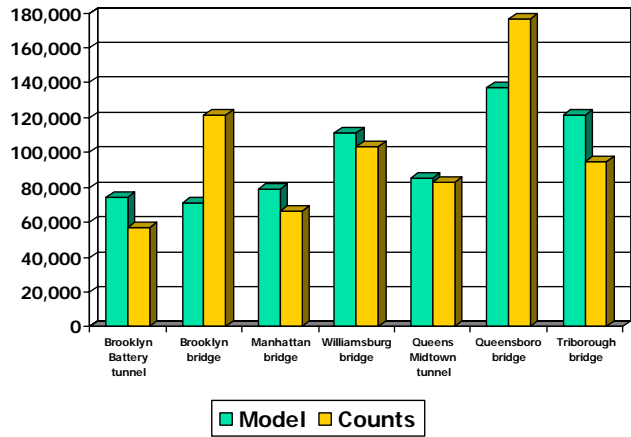
5.3.2 Hudson River Crossings – AM Peak Period



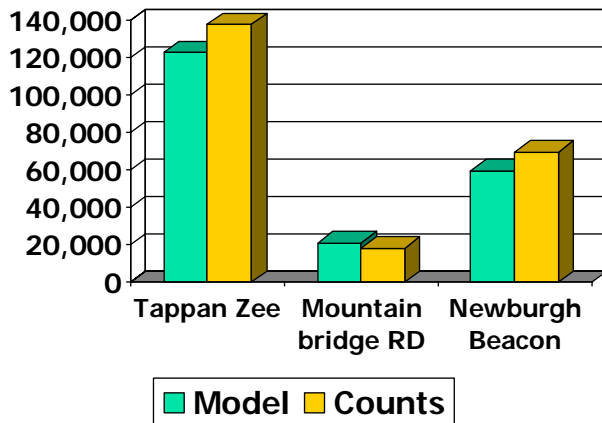
5.3.3 Hudson River Crossings – AM Peak Period – By Direction



5.3.4 East River Crossings – Daily



5.3.5 Mid-Hudson Bridges – Daily



5.3.6 Staten Island Bridges – Daily

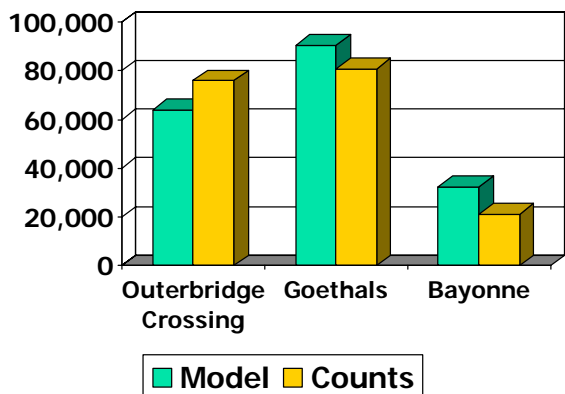


Table 5-7 East River Sector - Summary of Tolled and Free Crossings: 2002 Volume Deviations from Count

Free or Tolled Crossings	Weekday	By Time Periods			
		AM	Midday	PM	Night
All Crossings	0%	0%	7%	14%	-20%
Tolled facilities	10%	5%	14%	21%	-1%
Free Bridges	-16%	-9%	-5%	2%	-41%

Table 5-8 Daily Vehicle Miles of Travel (DVMT) And Total HPMS Estimates - 2002 Update - Base / Model Calibration – Network Links

County / Sub-Region	2002 HPMS-based Estimate	2002 Calibration - Base [050120]	Difference	Percent
1 MANHATTAN	10,805,116	8,937,575	-1,867,541	-17%
2 QUEENS	19,117,071	18,694,675	-422,396	-2%
3 BRONX	11,634,395	7,795,840	-3,838,556	-33%
4 BROOKLYN	12,093,214	11,246,149	-847,064	-7%
5 STATEN ISLAND	4,805,349	4,281,230	-524,120	-11%
6 NASSAU	29,390,980	25,061,943	-4,329,037	-15%
7 SUFFOLK	40,889,114	30,963,304	-9,925,809	-24%
8 WESTCHESTER	21,143,962	17,802,394	-3,341,568	-16%
9 ROCKLAND	6,315,936	5,963,527	-352,409	-6%
10 PUTNAM	5,951,862	2,615,729	-3,336,133	-56%
11 ORANGE	9,811,000	9,994,924	183,924	2%
12 DUTCHESS	6,424,000	6,167,366	-256,634	-4%
13 NJTPA		141,472,107		
14 CONNECTICUT		37,119,231		
15 MERCER		11,629,509		
NYMTC 10	162,147,000	133,362,366	-28,784,634	-18%
NY 12 Counties	178,382,000	149,524,656	-28,857,344	-16%

5.3.3 Transit Validation

The BPM core models were originally validated and calibrated for 1996 for target daily tours and stops. The assignment procedures for transit, however, unlike the highway assignment are for the AM 4 hour peak period only.

In Figures 5-4 and Table 5.9 shows the results of the BPM 2002 update and re-calibration with respect to modeled transit trips and observed weekday transit travel entering the Manhattan CBD or Hub, on a typical Fall day.

Full calibration of the BPM for AM peak period transit assignment would involve review and possible adjustment to the time-of-day factors that allocate daily transit trips to the morning peak period assigned, as well as detailed checking of the route system coding and assignment parameters. This level of calibration was not done for transit loadings as part of the Base Year 1996 model implementation, nor for the 2002 Update. It is anticipated that with a proposed effort by NYMTC to focus on enhancing the BPM for use in transit planning, enhancements to the mode choice model will be made along with a more close calibration of the transit assignments, along with other extensions of the NYMTC model aimed at extending the transit forecasting and analysis capabilities of the BPM.

Figure 5-4 BPM 2002 Transit Validation – Three Sectors Hub-Bound Sectors

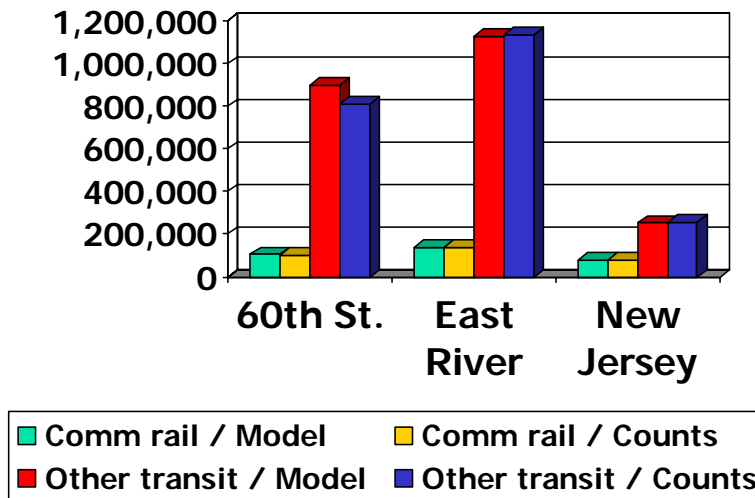


Table 5-9 BPM 2002 Transit Validation – to Hub-Bound Counts

Scenario: 2002 MODEL / BASE YEAR - RC-55G-5
 Hub-Bound 2002 (Preliminary) - Daily Inbound

Total - All Transit					
Sector		BPM Trips	Counts	Error	% Diff
60th St.	1	940,285	909,103	31,182	3%
East River	2	1,261,257	1,276,632	-15,375	-1%
New Jersey	3	<u>327,769</u>	<u>334,737</u>	<u>-6,968</u>	<u>-2%</u>
		2,529,311	2,520,472	8,839	0%

Commuter Rail (only)					
Sector		BPM Trips	Counts	Error	% Diff
60th St.	1	99,677	100,286	-609	-1%
East River	2	141,987	140,466	1,521	1%
New Jersey	3	<u>74,252</u>	<u>75,842</u>	<u>-1,590</u>	<u>-2%</u>
		315,916	316,594	-678	0%

Other Transit					
Sector		BPM Trips	Counts	Error	% Diff
60th St.	1	840,608	808,817	31,791	4%
East River	2	1,119,270	1,136,166	-16,896	-1%
New Jersey	3	<u>253,517</u>	<u>258,895</u>	<u>-5,378</u>	<u>-2%</u>
		2,213,395	2,203,878	9,517	0%

6 POST PROCESSING FOR AIR QUALITY ANALYSIS (PPSUITE)

6.1 MODIFICATIONS FOR BPM UPDATE AND MOBILE 6

Post processing of BPM model outputs to support emissions estimation is performed with the PPSUITE software package. This software is an extension and update of the Post Processor for Air Quality (PPAQ) software that was previously used by NYMTC and which was written to support MOBILE5. With the introduction of MOBILE6 by USEPA, a number of revisions needed to be installed in the software to provide the needed data inputs.

Enhancements that were implemented to link PPSUITE to the BPM included the following:

1. A new network conversion program (BPM2PPAQ) was developed to unload network and traffic data from the TransCAD network format, adjust and transform facility type and other descriptive data, and prepare input files needed by the PPSUITE software.
2. Free flow speeds, capacities, and delay model coefficients were derived to be consistent with the Physical Link Type (PLT) notation employed by the BPM to describe highway characteristics. Highway speed data had been collected to support BPM development, and the speed calculation models were adjusted and calibrated to be consistent with that observed data and the speeds produced by the BPM for loaded network conditions.
3. Methods for computing truck volumes and VMT were adjusted to be consistent with the BPM. Because the BPM produces truck assignments which were calibrated to truck counts at numerous locations, the assigned truck volumes produced by the BPM were taken to be the principal source of truck volume and VMT for the emissions process.
4. Transit bus volumes are obtained from the BPM coded transit networks. This locally derived data was assumed to be superior to the VMT fraction defaults encoded in MOBILE6.
5. A method was developed to reconcile VMT produced by the BPM with reported Highway Performance Monitoring System (HPMS) totals. This method and its results are described below. It was generally consistent with the method previously used and accepted for prior NYMTC conformity analyses.
6. Additional network data such as traffic signal locations and characteristics and ITS characteristics were coded in portions of the highway network to provide better fidelity for analyzing traffic signal improvement and ITS projects. Methods were developed to incorporate this data into the PPSUITE highway network VMT and speed analysis.
7. PPSUITE computes highway link volumes for each hour of the day, stratified by vehicle type. This data is then reformatted and aggregated appropriately to provide the speed profiles and vehicle mix by time of day that MOBILE6 requires.
8. An integrated software setup was provided to NYMTC that runs the highway network conversion, the PPSUITE network analysis and VMT / speed computation, prepares data for input to MOBILE6, runs MOBILE6, post processes the MOBILE6 emissions databases (including multiplying VMT by the emissions factors produced by MOBILE6 to produce total emissions quantities), and runs a report generator to summarize the results.

6.2 BASE YEAR CALIBRATION (HPMS, VMT, SPEEDS)

Extensive effort was given to calibration and validation of VMT and speeds. This section reports the results of that effort.

6.2.1 Vehicle Miles of Travel (VMT) and HPMS

The calibration of the BPM and its ability to produce accurate highway volume estimates was described above in Section 5 of this document. The highway traffic volumes produced by the BPM are the starting point for emissions analysis and they were determined to be sufficiently accurate for that purpose.

Vehicle Miles of Travel (VMT) are computed from the highway assignments by PPSUITE. However, several adjustments must be applied before the highway traffic data can be input to the emissions models:

1. The model outputs represent a typical or average weekday condition, whereas emissions analysis is performed for either a January or July weekday. Therefore adjustments are made to factor the average weekday model output to seasonally correct values, using standard seasonal factors obtained from NYSDOT.
2. VMT totals are derived and reported annually through the Highway Performance Monitoring System (HPMS). It is a requirement that VMT produced by the model be reconciled with these reported totals, and this is done in two steps: First, for freeways and arterials the adjustments are small because the model contains all such highways and has been calibrated to produce accurate volumes on them. Therefore a series of factors was derived for each combination of county and functional group (freeways vs. arterials) that, when multiplied times the model output, produces VMT that corresponds to the HPMS VMT. These factors are applied on a link-by-link basis prior to speed calculation, so that computed speeds reflect the volume adjustments. Second, most local streets are not included in the model. Therefore speeds are computed on those local streets that are in the model, but substantial VMT is added to account for the missing street coverage. This additional VMT is obtained by using factors which are derived by dividing HPMS local street VMT by BPM local street VMT, for each of the NYMTC counties.
3. The set of factors derived from and applied to the base-year condition are carried forward into future years and applied identically without modification.

The resulting adjusted VMT totals were as shown in Table 6.1.

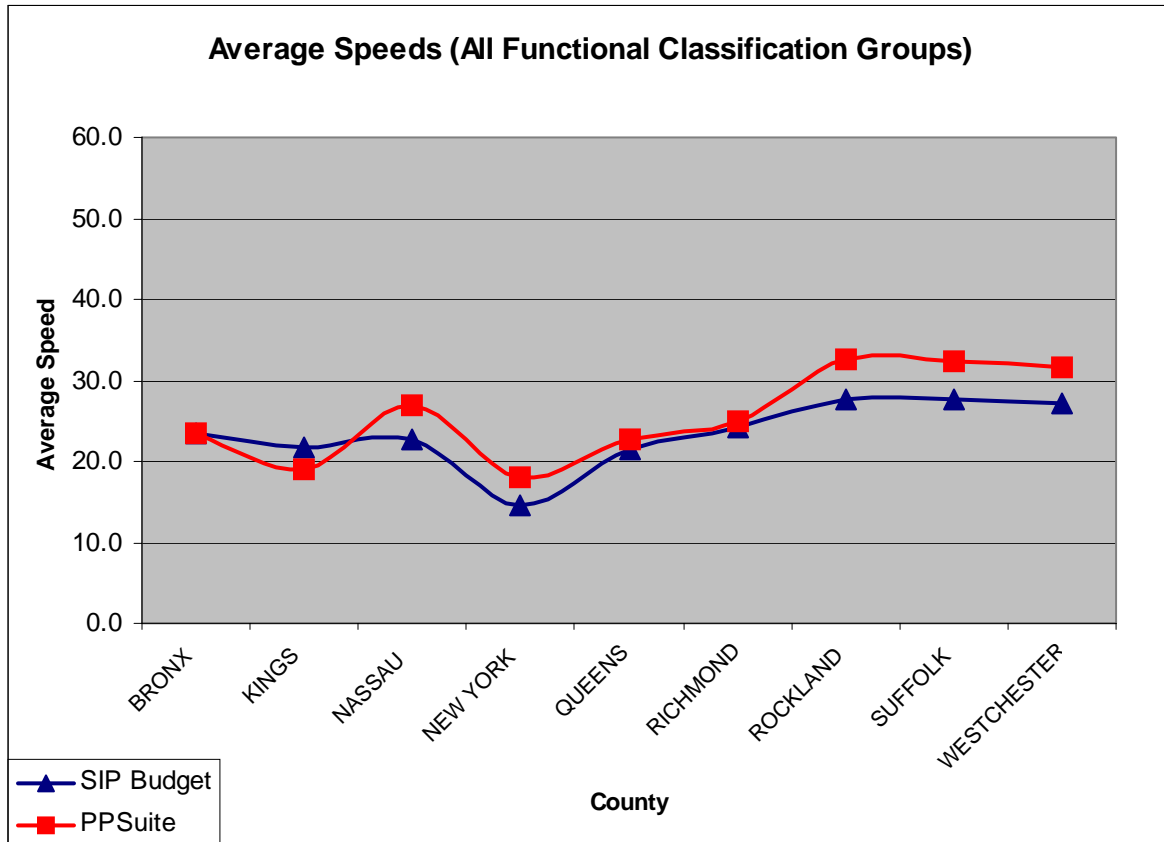
Table 6.1 VMT Totals for 2002 (Thousands of Vehicle Miles)

County	Raw Model (Average Weekday)	HPMS (AADT)	Adjusted PPSUITE	
			(January)	(July)
Bronx	7,571	8,927	8,180	9,413
Kings	11,426	12,034	10,961	12,612
New York	8,821	9,448	8,676	9,964
Queens	18,822	19,161	17,569	20,213
Richmond	4,277	5,573	5,060	5,823
NYC Subtotal	50,917	55,142	50,447	58,025
Nassau	25,049	27,860	25,301	29,139
Suffolk	30,795	44,317	39,769	45,808
Putnam	2,602	4,890	4,398	5,067
Rockland	5,961	7,309	6,701	7,717
Westchester	17,837	22,629	20,850	24,013
Total	133,162	162,147	147,466	169,768

6.2.2 Speeds

Observed speed data was obtained through an extensive speed survey conducted on major travel corridors as part of the based data collection process for the BPM model development effort. Speeds computed by PPSUITE were then compared to those observed speeds on both a corridor or facility basis, and on an overall average basis for combinations of county and functional group (freeway, arterial, local). Adjustments were made to the default link capacities, free-flow speeds, and delay coefficients to bring the computed speeds into alignment with observed speeds.

Another source of speed data was the speeds used by NYSDOT and NYSDEC for SIP emissions inventories and budgets. It was found that the speeds computed by PPSUITE were consistent with those independently derived speeds as well, although in general the PPSUITE speeds (which were consistent with observed data) were 3 to 5 miles per hour faster than those developed by NYSDOT/NYSDEC. The following Figure 6.1 compares these two results.

Figure 6.1. Comparison of Speeds for All Functional Classes

After investigating and comparing these sources it was concluded that the speeds computed by PPSUITE are computed by a robust link-by-link, hour-by-hour analysis, and are consistent with a large database of observed speeds. Therefore it was concluded that the PPSUITE speed model was appropriate for use in NYMTC's emissions analysis.

APPENDIX A: SUMMARY OF UPDATED SOCIO-ECONOMIC/DEMOGRAPHIC (SED) DATA

APPENDIX A: SUMMARY of BPM 2002 SED DATA UPDATE

New SED - BPM Update 2002													Year 2000					Report	Report
Report	Sum												Mean	Mean					
NYM_CO	HHPOP	GQPOP	GQPOPINS	GQPOPSTR	GQPOPOTH	HHNUM	ELF	EMPTOT	EMPRET	EMPOFF	UNVENROL	K12ETOT	NY	HHSIZE	HHINCX	NYEARNWORK			
1 MANHATTAN	1,477,366	60,114	13,703	6,448	39,954	739,260	785,797	2,089,892	230,491	1,311,088	232,494	195,988	1	2.00	98,454	1	64,786		
2 QUEENS	2,202,513	26,864	17,330	443	9,091	782,575	1,058,780	596,571	103,361	113,049	70,818	386,549	2	2.81	60,492	2	38,446		
3 BRONX	1,285,933	47,242	26,937	3,379	16,930	463,215	483,001	280,940	72,727	22,995	49,637	310,384	3	2.77	43,539	3	36,545		
4 BROOKLYN	2,426,010	39,308	16,853	3,460	18,996	880,741	982,904	667,473	92,569	147,720	83,399	506,057	4	2.75	51,749	4	37,661		
5 STATEN ISLAND	434,501	9,223	5,941	48	3,233	156,346	205,500	120,242	27,084	25,238	16,714	85,893	5	2.78	74,850	5	39,406		
6 NASSAU	1,308,539	21,657	10,150	234	11,271	445,658	672,768	552,997	99,113	143,493	62,759	246,145	6	2.94	106,160	6	45,715		
7 SUFFOLK	1,391,014	28,572	12,631	693	15,253	469,376	704,816	563,230	131,939	123,280	60,575	273,704	7	2.96	88,784	7	41,871		
8 WESTCHESTER	899,684	23,653	12,552	9	11,091	337,091	438,243	400,886	60,677	102,200	65,604	170,747	8	2.67	111,273	8	50,914		
9 ROCKLAND	279,105	7,648	4,113	0	3,535	92,676	141,903	100,970	16,769	18,298	13,870	60,016	9	3.01	95,324	9	42,786		
10 PUTNAM	93,581	2,164	799	0	1,365	32,703	53,102	23,995	2,866	4,378	0	18,867	10	2.86	97,299	10	41,093		
11 ORANGE	327,662	13,690	6,485	25	7,181	114,785	152,392	127,661	27,492	22,542	8,593	75,198	11	2.85	70,246	11	34,464		
12 DUTCHESS	261,989	18,161	8,363	0	9,796	99,537	117,598	114,343	16,583	19,012	20,107	53,797	12	2.63	73,546	12	37,914		
13 FARIFIELD	864,592	17,968	5,098	860	12,014	324,225	454,000	443,954	74,041	141,116	24,964	167,737	13	2.67	115,540	13	55,835		
14 BERGEN	872,769	11,349	6,655	22	4,672	330,817	436,801	432,805	69,025	116,920	6,741	150,192	14	2.64	98,485	14	47,844		
15 PASSAIC	479,073	9,976	5,643	131	4,201	163,856	219,301	173,220	32,033	39,147	9,147	93,917	15	2.92	70,451	15	41,960		
16 HUDSON	599,532	9,451	5,389	429	3,633	230,549	272,305	234,700	30,170	71,536	10,406	106,447	16	2.60	61,550	16	44,922		
17 ESSEX	770,508	22,800	11,363	1,249	10,196	283,620	365,258	348,540	39,509	90,882	32,219	155,597	17	2.72	72,322	17	46,722		
18 UNION	514,733	7,808	4,676	77	3,054	186,124	263,000	229,075	35,074	51,350	9,942	96,771	18	2.77	83,784	18	46,866		
19 MORRIS	461,026	9,182	4,772	10	4,401	169,711	258,400	274,575	35,538	82,086	7,673	84,321	19	2.72	111,061	19	53,669		
20 SOMERSET	292,981	4,509	3,921	51	536	108,984	174,000	162,255	19,986	49,307	0	54,020	20	2.69	114,802	20	54,685		
21 MIDDLESEX	729,342	20,819	8,267	14	12,542	265,815	413,501	325,625	50,340	88,657	27,990	130,732	21	2.74	77,182	21	45,520		
22 MONMOUTH	605,265	10,034	5,456	11	4,569	224,236	304,705	241,700	49,320	65,762	4,311	120,490	22	2.70	94,879	22	43,463		
23 OCEAN	503,025	7,891	5,937	5	1,947	200,402	213,499	136,185	35,585	28,008	2,121	88,689	23	2.51	60,292	23	34,987		
24 HUNTERDON	117,643	4,346	4,015	0	332	43,678	68,000	49,170	8,003	11,320	0	23,498	24	2.69	110,218	24	46,391		
25 WARREN	100,971	1,463	964	1	498	38,660	50,701	37,415	9,191	5,359	1,549	19,621	25	2.61	75,566	25	38,123		
26 SUSSEX	142,479	1,687	1,542	0	145	50,831	73,503	39,950	9,589	8,634	0	30,668	26	2.80	84,879	26	36,126		
27 NEW HAVEN	796,329	27,662	11,609	180	15,882	319,044	421,093	362,125	63,538	81,772	31,768	154,859	27	2.50	69,590	27	40,742		
28 MERCER	329,669	21,094	7,349	10	13,733	125,807	173,601	200,230	24,332	56,460	27,480	62,905	28	2.62	85,103	28	47,395		
Total	20,567,294	486,335	228,513	17,789	240,051	7,680,322	9,958,472	9,330,724	1,466,945	3,041,609	880,881	3,923,809	To	2.68	79,881	Tc	48,786		
Prior BPM SED																			
Report	Sum												Mean	Mean					
NYM_CO	HHPOP	GQPOP	GQPOPINS	GQPOPSTR	GQPOPOTH	HHNUM	ELF	EMPTOT	EMPRET	EMPOFF	UNVENROL	K12ETOT	NY	HHSIZE	HHINCX	NYEARNWORK			
1 MANHATTAN	1,477,357	59,837	13,599	6,368	39,102	738,645	785,398	2,147,357	234,774	1,344,603	232,448	195,027	1	2.00	88,220	1	80,549		
2 QUEENS	2,202,502	26,873	17,171	441	7,481	782,661	1,057,902	608,556	89,349	111,056	70,818	389,856	2	2.81	54,126	2	39,052		
3 BRONX	1,285,526	47,235	26,921	3,379	13,715	463,259	482,901	287,522	73,713	22,818	49,640	311,239	3	2.77	38,964	3	36,470		
4 BROOKLYN	2,426,027	39,299	16,846	3,471	14,976	880,727	982,596	721,065	95,734	157,229	83,399	512,323	4	2.75	46,307	4	34,524		
5 STATEN ISLAND	434,542	9,186	5,871	47	2,800	156,341	205,403	118,021	20,579	24,786	16,714	85,665	5	2.78	66,979	5	36,635		
6 NASSAU	1,312,677	21,657	10,150	234	8,651	447,318	677,199	566,135	101,295	150,031	62,759	246,143	6	2.93	95,015	6	46,535		
7 SUFFOLK	1,391,014	28,581	12,604	692	14,311	469,377	707,006	630,562	107,183	124,776	60,392	273,781	7	2.96	79,448	7	42,300		
8 WESTCHESTER	899,684	23,655	12,553	9	10,710	337,091	439,595	431,421	63,165	104,810	65,604	170,745	8	2.67	99,572	8	53,869		
9 ROCKLAND	279,105	7,648	4,113	0	3,467	92,676	142,401	107,313	17,553	19,726	13,870	60,017	9	3.01	85,299	9	44,091		
10 PUTNAM	93,581	2,164	799	0	1,282	32,703	53,300	24,257	3,295	4,315	0	18,867	10	2.86	87,067	10	39,374		
11 ORANGE	327,662	13,690	6,485	25	7,109	114,786	152,900	131,382	24,307	21,543	8,593	75,204	11	2.85	62,859	11	34,274		
12 DUTCHESS	261,989	18,163	10,138	0	6,160	99,537	117,998	115,308	16,903	19,084	20,107	53,679	12	2.63	65,811	12	39,325		
13 FARIFIELD	864,592	17,970	5,098	860	4,344	324,225	443,924	447,450	73,179	143,605	24,964	167,740	13	2.67	103,311	13	61,403		
14 BERGEN	872,769	11,349	6,655	22	4,026	330,817	437,197	468,745	71,973	126,942	6,741	150,192	14	2.64	89,184	14	50,317		
15 PASSAIC	479,073	11,304	5,792	140	5,244	163,856	218,999	187,921	32,332	42,767	9,172	94,172	15	2.92	63,042	15	40,128		
16 HUDSON	599,532	9,451	5,389	430	3,336	230,549	272,298	250,204	31,848	74,198	10,406	106,446	16	2.60	55,078	16	48,131		
17 ESSEX	770,508	21,802	10,380	1,245	6,617	283,620	365,906	379,504	42,813	101,449	32,113	155,296	17	2.72	68,664	17	45,210		
18 UNION	514,733	7,808	4,676	77	2,947	186,124	262,700	233,190	34,041	52,957	9,942	96,772	18	2.77	74,974	18	48,460		
19 MORRIS	461,026	9,186	6,033	10	2,994	169,711	258,203	303,103	40,316	90,858	7,673	84,319	19	2.72	101,570	19	72,779		
20 SOMERSET	292,981	4,509	3,921	51	527	108,984	174,001	190,707	23,855	58,215	0	54,020	20	2.69	102,730	20	55,986		
21 MIDDLESEX	729,342	20,820	8,270	14	12,410	265,815	413,400	415,063	57,369	120,544	27,990	130,731	21	2.74	74,002	21	48,061		
22 MONMOUTH	605,265	10,036	5,398	11	4,578	224,236	304,701	254,514	49,596	70,235	4,311	120,378	22	2.70	84,902	22	41,585		
23 OCEAN	503,025	7,891	5,937	5	1,784	200,402	213,600	147,270	35,045	30,534	2,121	88,689	23	2.51	58,328	23	31,550		
24 HUNTERDON	117,643	4,346	4,015	0	178	43,678	68,199	56,009	9,396	13,890	0	23,496	24	2.69	101,248	24	50,084		
25 WARREN	100,971	1,466	927	1	444	38,660	50,699	36,016	7,565	4,997	1,549	19,619	25	2.61	67,619	25	35,193		
26 SUSSEX	142,479	1,687	1,542	0	66	50,831	73,501	43,503	7,102	9,852	0	30,665	26	2.80	75,953	26	35,089		
27 NEW HAVEN	796,329	27,672	11,609	180	10,099	319,045	409,762	361,839	63,476	81,603	31,768	154,864	27	2.49	62,271	27	42,852		
28 MERCER	329,669	21,092	7,349	10	13,733	125,807	173,601	240,106	26,138	65,852	27,480	62,905	28	2.62	76,154	28	39,467		
Total	20,571,603	486,377	230,241	17,722	203,091	7,681,481	9,945,290	9,904,043	1,453,894	3,193,275	880,574	3,932,850	To	2.68	72,036	Tc	53,010		

APPENDIX A: SUMMARY of BPM 2002 SED DATA UPDATE

Difference: New minus Current														Year 2000				Report			
Report														Report				Report			
Sum														Mean				Mean			
NYM_CO	HHPOP	GQPOP	GQPOPINS	GQPOPSTR	GQPOPTH	HHNUM	ELF	EMPTOT	EMPRET	EMPOFF	UNVENROL	K12ETOT	NY	HHSIZE	HHINCX	NY	EARNWORK				
1 MANHATTAN	9	277	104	80	852	615	399	-57,465	-4,283	-33,515	46	961	1	0.00	10,233	1	-15,762				
2 QUEENS	11	-9	159	2	1,610	-86	878	-11,985	14,012	1,993	0	-3,307	2	0.00	6,366	2	-606				
3 BRONX	-133	7	16	0	3,215	-44	100	-6,582	-986	177	-3	-855	3	0.00	4,575	3	75				
4 BROOKLYN	-17	9	7	-11	4,020	14	308	-53,592	-3,165	-9,509	0	-6,266	4	0.00	5,442	4	3,137				
5 STATEN ISLAND	-41	37	70	1	433	5	97	2,221	6,505	452	0	228	5	0.00	7,871	5	2,771				
6 NASSAU	-4,138	0	0	0	2,620	-1,660	-4,431	-13,138	-2,182	-6,538	0	2	6	0.00	11,145	6	-820				
7 SUFFOLK	0	-9	27	1	942	-1	-2,190	-67,332	24,756	-1,496	183	-77	7	0.00	9,336	7	-428				
8 WESTCHESTER	0	-2	-1	0	381	0	-1,352	-30,535	-2,488	-2,610	0	2	8	0.00	11,700	8	-2,956				
9 ROCKLAND	0	0	0	0	68	0	-498	-6,343	-784	-1,428	0	-1	9	0.00	10,025	9	-1,305				
10 PUTNAM	0	0	0	0	83	0	-198	-262	-429	63	0	0	10	0.00	10,231	10	1,719				
11 ORANGE	0	0	0	0	72	-1	-508	-3,721	3,185	999	0	-6	11	0.00	7,388	11	189				
12 DUTCHESS	0	-2	-1,775	0	3,636	0	-400	-965	-320	-72	0	118	12	0.00	7,735	12	-1,411				
13 FARIFIELD	0	-2	0	0	7,670	0	10,076	-3,496	862	-2,489	0	-3	13	0.00	12,139	13	-5,568				
14 BERGEN	0	0	0	0	646	0	-396	-35,940	-2,948	-10,022	0	0	14	0.00	9,300	14	-2,473				
15 PASSAIC	0	-1,328	-149	-9	-1,043	0	302	-14,701	-299	-3,620	-25	-255	15	0.00	7,409	15	1,833				
16 HUDSON	0	0	0	-1	297	0	7	-15,504	-1,678	-2,662	0	1	16	0.00	6,472	16	-3,209				
17 ESSEX	0	998	983	4	3,579	0	-648	-30,964	-3,304	-10,567	106	301	17	0.00	3,658	17	1,512				
18 UNION	0	0	0	0	107	0	300	-4,115	1,033	-1,607	0	-1	18	0.00	8,811	18	-1,595				
19 MORRIS	0	-4	-1,261	0	1,407	0	197	-28,528	-4,778	-8,772	0	2	19	0.00	9,492	19	-19,110				
20 SOMERSET	0	0	0	0	9	0	-1	-28,452	-3,869	-8,908	0	0	20	0.00	12,072	20	-1,301				
21 MIDDLESEX	0	-1	-3	0	132	0	101	-89,438	-7,029	-31,887	0	1	21	0.00	3,180	21	-2,540				
22 MONMOUTH	0	-2	58	0	-9	0	4	-12,814	-276	-4,473	0	112	22	0.00	9,977	22	1,877				
23 OCEAN	0	0	0	0	163	0	-101	-11,085	540	-2,526	0	0	23	0.00	1,964	23	3,437				
24 HUNTERDON	0	0	0	0	154	0	-199	-6,839	-1,393	-2,570	0	2	24	0.00	8,970	24	-3,693				
25 WARREN	0	-3	37	0	54	0	2	1,399	1,626	362	0	2	25	0.00	7,946	25	2,930				
26 SUSSEX	0	0	0	0	79	0	2	-3,553	2,487	-1,218	0	3	26	0.00	8,925	26	1,038				
27 NEW HAVEN	0	-10	0	0	5,783	-1	11,331	286	62	169	0	-5	27	0.00	7,318	27	-2,110				
28 MERCER	0	2	0	0	0	0	0	-39,876	-1,806	-9,392	0	0	28	0.00	8,949	28	7,929				
Total	-4,309	-42	-1,728	67	36,960	-1,159	13,182	-573,319	13,051	-151,662	307	-9,041	To	0.00	7,845	Tc	-4,224				

Percent Difference: New minus Current																		
Report																		Report
Sum																		Mean
NYM_CO	HHPOP	GQPOP	GQPOPINS	GQPOPSTR	GQPOPTH	HHNUM	ELF	EMPTOT	EMPRET	EMPOFF	UNVENROL	K12ETOT	NY	HHSIZE	HHINCX	NY	EARNWORK	
1 MANHATTAN	0.0%	0.5%	0.8%	1.3%	2.2%	0.1%	0.1%	-2.7%	-1.8%	-2.5%	0.0%	0.5%	1	-0.1%	11.6%	1	-19.6%	
2 QUEENS	0.0%	0.0%	0.9%	0.5%	21.5%	0.0%	0.1%	-2.0%	15.7%	1.8%	0.0%	-0.8%	2	0.0%	11.8%	2	-1.6%	
3 BRONX	0.0%	0.0%	0.1%	0.0%	23.4%	0.0%	0.0%	-2.3%	-1.3%	0.8%	0.0%	-0.3%	3	0.0%	11.7%	3	0.2%	
4 BROOKLYN	0.0%	0.0%	0.0%	-0.3%	26.8%	0.0%	0.0%	-7.4%	-3.3%	-6.0%	0.0%	-1.2%	4	0.0%	11.8%	4	9.1%	
5 STATEN ISLAND	0.0%	0.4%	1.2%	2.1%	15.5%	0.0%	0.0%	1.9%	31.6%	1.8%	0.0%	0.3%	5	0.0%	11.8%	5	7.6%	
6 NASSAU	-0.3%	0.0%	0.0%	0.0%	30.3%	-0.4%	-0.7%	-2.3%	-2.2%	-4.4%	0.0%	0.0%	6	0.0%	11.7%	6	-1.8%	
7 SUFFOLK	0.0%	0.0%	0.2%	0.1%	6.6%	0.0%	-0.3%	-10.7%	23.1%	-1.2%	0.3%	0.0%	7	0.0%	11.8%	7	-1.0%	
8 WESTCHESTER	0.0%	0.0%	0.0%	0.0%	3.6%	0.0%	-0.3%	-7.1%	-3.9%	-2.5%	0.0%	0.0%	8	0.0%	11.8%	8	-5.5%	
9 ROCKLAND	0.0%	0.0%	0.0%		2.0%	0.0%	-0.3%	-5.9%	-4.5%	-7.2%	0.0%	0.0%	9	0.0%	11.8%	9	-3.0%	
10 PUTNAM	0.0%	0.0%	0.0%		6.5%	0.0%	-0.4%	-1.1%	-13.0%	1.5%	0.0%	0.0%	10	0.0%	11.8%	10	4.4%	
11 ORANGE	0.0%	0.0%	0.0%	0.0%	1.0%	0.0%	-0.3%	-2.8%	13.1%	4.6%	0.0%	0.0%	11	0.0%	11.8%	11	0.6%	
12 DUTCHESS	0.0%	0.0%	-17.5%		59.0%	0.0%	-0.3%	-0.8%	-1.9%	-0.4%	0.0%	0.2%	12	0.0%	11.8%	12	-3.6%	
13 FARIFIELD	0.0%	0.0%	0.0%	0.0%	176.6%	0.0%	2.3%	-0.8%	1.2%	-1.7%	0.0%	0.0%	13	0.0%	11.7%	13	-9.1%	
14 BERGEN	0.0%	0.0%	0.0%	0.0%	16.0%	0.0%	-0.1%	-7.7%	-4.1%	-7.9%	0.0%	0.0%	14	0.0%	10.4%	14	-4.9%	
15 PASSAIC	0.0%	-11.7%	-2.6%	-6.4%	-19.9%	0.0%	0.1%	-7.8%	-0.9%	-8.5%	-0.3%	-0.3%	15	0.0%	11.8%	15	4.6%	
16 HUDSON	0.0%	0.0%	0.0%	-0.2%	8.9%	0.0%	0.0%	-6.2%	-5.3%	-3.6%	0.0%	0.0%	16	0.0%	11.8%	16	-6.7%	
17 ESSEX	0.0%	4.6%	9.5%	0.3%	54.1%	0.0%	-0.2%	-8.2%	-7.7%	-10.4%	0.3%	0.2%	17	0.0%	5.3%	17	3.3%	
18 UNION	0.0%	0.0%	0.0%	0.0%	3.6%	0.0%	0.1%	-1.8%	3.0%	-3.0%	0.0%	0.0%	18	0.0%	11.8%	18	-3.3%	
19 MORRIS	0.0%	0.0%	-20.9%	0.0%	47.0%	0.0%	0.1%	-9.4%	-11.9%	-9.7%	0.0%	0.0%	19	0.0%	9.3%	19	-26.3%	
20 SOMERSET	0.0%	0.0%	0.0%	0.0%	1.7%	0.0%	0.0%	-14.9%	-16.2%	-15.3%	0.0%	0.0%	20	0.0%	11.8%	20	-2.3%	
21 MIDDLESEX	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	0.0%	-21.5%	-12.3%	-26.5%	0.0%	0.0%	21	0.0%	4.3%	21	-5.3%	
22 MONMOUTH	0.0%	0.0%	1.1%	0.0%	-0.2%	0.0%	0.0%	-5.0%	-0.6%	-6.4%	0.0%	0.1%	22	0.0%	11.8%	22	4.5%	
23 OCEAN	0.0%	0.0%	0.0%	0.0%	9.1%	0.0%	0.0%	-7.5%	1.5%	-8.3%	0.0%	0.0%	23	0.0%	3.4%	23	10.9%	
24 HUNTERDON	0.0%	0.0%	0.0%		86.5%	0.0%	-0.3%	-12.2%	-14.8%	-18.5%	0.0%	0.0%	24	0.0%	8.9%	24	-7.4%	
25 WARREN	0.0%	-0.2%	4.0%	0.0%	12.2%	0.0%	0.0%	3.9%	21.5%	7.2%	0.0%	0.0%	25	0.0%	11.8%	25	8.3%	
26 SUSSEX	0.0%	0.0%	0.0%		119.7%	0.0%	0.0%	-8.2%	35.0%	-12.4%	0.0%	0.0%	26	0.0%	11.8%	26	3.0%	
27 NEW HAVEN	0.0%	0.0%	0.0%	0.0%	57.3%	0.0%	2.8%	0.1%	0.1%	0.2%	0.0%	0.0%	27	0.0%	11.8%	27	-4.9%	
28 MERCER	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-16.6%	-6.9%	-14.3%	0.0%	0.0%	28	0.0%	11.8%	28	20.1%	
Total	0.0%	0.0%	-0.8%	0.4%	18.2%	0.0%	0.1%	-5.8%	0.9%	-4.7%	0.0%	-0.2%	To	0.0%	10.9%	Tc	-8.0%	

APPENDIX A: SUMMARY of BPM 2002 SED DATA UPDATE

New SED - BPM Update 2002													Year 2002					Report		Report	
Sum													Mean					Mean		Mean	
NYM_CO	HHPOP	GQPOP	GQPOPINS	GQPOPSTR	GQPOPOTH	HHNUM	ELF	EMPTOT	EMPRET	EMPOFF	UNVENROL	K12ETOT	NY	HHSIZE	HHINCX	NY	EARNWORK				
1 MANHATTAN	1,494,936	60,835	13,875	6,526	40,451	749,282	765,003	2,085,127	228,720	1,315,991	231,525	198,409	1	2.00	98,398	1	64,814				
2 QUEENS	2,200,328	26,836	17,307	442	9,085	788,210	1,028,589	597,077	103,319	113,760	71,351	386,158	2	2.79	60,493	2	38,449				
3 BRONX	1,310,171	48,132	27,440	3,445	17,254	468,619	474,900	280,940	72,727	22,995	50,532	316,356	3	2.80	43,539	3	36,545				
4 BROOKLYN	2,436,196	39,452	16,921	3,478	19,055	888,090	960,105	669,670	92,442	150,946	84,280	508,168	4	2.74	51,748	4	37,680				
5 STATEN ISLAND	445,955	9,429	6,070	49	3,309	160,416	204,401	120,356	27,080	25,362	16,922	88,142	5	2.78	74,850	5	39,406				
6 NASSAU	1,313,187	21,727	10,201	235	11,293	446,993	682,743	546,541	97,904	141,995	63,204	246,947	6	2.94	106,185	6	45,715				
7 SUFFOLK	1,426,640	29,304	12,952	704	15,648	479,596	728,031	564,605	131,943	123,968	60,629	280,864	7	2.97	88,681	7	41,871				
8 WESTCHESTER	913,987	23,780	12,625	9	11,151	342,017	446,735	399,028	60,272	103,004	66,145	173,422	8	2.67	111,276	8	50,913				
9 ROCKLAND	283,461	7,769	4,176	0	3,589	93,940	149,903	103,505	17,173	18,820	13,978	60,952	9	3.02	95,326	9	42,787				
10 PUTNAM	96,305	2,226	823	0	1,404	33,250	56,997	25,059	2,994	4,572	0	19,415	10	2.90	97,300	10	41,093				
11 ORANGE	341,523	14,268	6,757	26	7,483	118,648	159,395	129,997	27,992	22,954	8,619	78,382	11	2.88	70,245	11	34,644				
12 DUTCHESS	269,023	18,650	8,371	0	10,279	101,682	124,200	117,394	17,027	19,525	20,073	55,245	12	2.65	73,604	12	37,913				
13 FARIFIELD	876,404	18,224	5,168	870	12,183	328,017	439,804	430,494	71,668	137,413	25,251	169,958	13	2.67	115,539	13	55,835				
14 BERGEN	882,974	11,480	6,740	22	4,720	334,487	425,699	425,881	67,778	115,921	6,807	151,883	14	2.64	98,620	14	47,829				
15 PASSAIC	485,060	11,445	6,447	147	4,851	166,205	214,000	166,607	30,864	37,468	9,269	95,401	15	2.92	70,749	15	41,918				
16 HUDSON	600,479	9,465	5,382	428	3,655	232,528	270,608	235,215	29,883	73,812	10,533	106,372	16	2.58	61,603	16	44,928				
17 ESSEX	776,026	21,613	10,776	1,181	9,658	285,183	357,676	343,231	38,578	90,235	32,607	156,117	17	2.72	72,251	17	46,713				
18 UNION	521,024	7,901	4,729	79	3,095	187,274	258,802	224,760	34,441	50,511	10,063	97,956	18	2.78	83,701	18	46,855				
19 MORRIS	469,272	9,348	4,887	10	4,450	173,705	254,600	273,352	35,397	81,769	7,759	85,860	19	2.70	111,000	19	53,656				
20 SOMERSET	303,058	4,664	4,063	52	548	112,832	170,300	155,342	19,534	47,028	0	55,703	20	2.69	115,376	20	54,322				
21 MIDDLESEX	750,970	21,439	8,561	15	12,860	271,055	401,800	322,608	49,802	88,125	28,447	134,548	21	2.77	77,228	21	45,512				
22 MONMOUTH	617,433	10,236	5,582	11	4,646	230,487	310,899	246,232	50,267	67,015	4,313	122,885	22	2.68	94,982	22	43,499				
23 OCEAN	528,481	8,289	6,236	6	2,047	208,363	223,200	144,430	37,473	29,527	2,104	92,799	23	2.54	60,326	23	34,976				
24 HUNTERDON	122,171	4,517	4,174	0	341	44,897	65,900	52,155	8,390	11,798	0	24,388	24	2.72	110,443	24	46,272				
25 WARREN	105,962	1,538	1,030	1	508	40,440	51,401	38,431	9,572	5,482	1,533	20,521	25	2.62	75,770	25	38,142				
26 SUSSEX	147,131	1,743	1,590	0	153	52,176	73,199	40,951	9,813	8,861	0	31,632	26	2.82	84,975	26	36,138				
27 NEW HAVEN	807,602	28,056	11,795	180	16,087	321,672	413,906	357,693	62,775	80,780	31,995	156,940	27	2.51	69,733	27	40,742				
28 MERCER	336,644	21,537	7,505	10	14,025	127,368	177,702	205,923	24,264	57,972	27,741	64,334	28	2.64	85,103	28	47,396				
Total	20,862,403	493,903	232,183	17,926	243,828	7,787,432	9,890,498	9,302,604	1,460,092	3,047,609	885,680	3,979,757	To	2.68	79,938	Tc	48,743				
Prior BPM SED													Year 2002					Report		Report	
Sum													Mean					Mean		Mean	
NYM_CO	HHPOP	GQPOP	GQPOPINS	GQPOPSTR	GQPOPOTH	HHNUM	ELF	EMPTOT	EMPRET	EMPOFF	UNVENROL	K12ETOT	NY	HHSIZE	HHINCX	NY	EARNWORK				
1 MANHATTAN	1,483,860	60,090	13,639	6,398	39,289	741,903	772,699	2,122,560	234,774	1,327,835	229,764	195,894	1	2.00	88,220	1	80,940				
2 QUEENS	2,196,718	26,813	17,129	439	7,464	780,611	1,036,601	609,065	89,349	111,564	71,234	388,844	2	2.81	54,126	2	39,438				
3 BRONX	1,294,624	47,566	27,114	3,403	13,809	466,530	475,707	287,522	73,713	22,818	49,932	313,442	3	2.77	38,964	3	36,830				
4 BROOKLYN	2,424,818	39,294	16,840	3,469	14,970	880,266	964,513	723,264	95,734	159,427	83,886	512,074	4	2.75	46,307	4	34,873				
5 STATEN ISLAND	441,710	9,329	5,969	48	2,843	158,920	203,900	118,135	20,579	24,900	16,761	87,071	5	2.78	66,980	5	36,993				
6 NASSAU	1,311,760	21,644	10,144	233	8,644	445,401	686,293	566,336	101,295	150,233	62,937	245,964	6	2.95	95,016	6	46,996				
7 SUFFOLK	1,425,093	29,274	12,907	708	14,661	480,032	724,794	630,711	107,183	124,925	60,563	280,492	7	2.97	79,449	7	42,718				
8 WESTCHESTER	909,044	23,655	12,553	9	10,710	340,541	447,997	433,664	63,165	107,063	65,788	172,487	8	2.67	99,573	8	54,778				
9 ROCKLAND	282,076	7,729	4,156	0	3,506	93,340	149,202	107,377	17,553	19,790	13,910	60,654	9	3.02	85,298	9	44,520				
10 PUTNAM	96,306	2,220	821	0	1,313	33,317	56,902	24,257	3,295	4,315	0	19,362	10	2.88	87,068	10	39,762				
11 ORANGE	340,483	14,226	6,737	25	7,387	119,128	158,600	131,382	24,307	21,543	8,593	78,145	11	2.86	62,858	11	34,612				
12 DUTCHESS	269,485	18,683	10,427	0	6,339	101,613	123,900	115,308	16,903	19,084	20,107	55,215	12	2.65	65,811	12	39,713				
13 FARIFIELD	868,980	18,065	5,121	865	4,365	324,889	436,720	448,504	73,179	144,663	25,036	168,591	13	2.68	103,310	13	62,023				
14 BERGEN	877,051	11,401	6,690	22	4,049	331,970	426,500	470,054	71,973	128,251	6,761	150,928	14	2.64	89,184	14	50,807				
15 PASSAIC	481,367	11,358	5,820	141	5,269	164,464	214,000	187,921	32,332	42,767	9,198	94,622	15	2.93	63,042	15	40,523				
16 HUDSON	596,753	9,408	5,364	428	3,319	227,127	272,700	258,454	31,848	82,449	10,467	105,958	16	2.63	55,078	16	48,851				
17 ESSEX	771,192	21,474	10,318	1,231	6,510	282,129	359,399	380,617	42,813	102,564	32,203	155,379	17	2.73	68,664	17	45,669				
18 UNION	516,220	7,829	4,692	78	2,956	185,329	258,501	233,248	34,041	53,013	9,970	97,052	18	2.79	74,974	18	48,936				
19 MORRIS	465,324	9,270	6,089	10	3,022	170,884	254,700	303,210	40,316	90,966	7,694	85,108	19	2.72	101,570	19	73,500				
20 SOMERSET	300,798	4,630	4,025	52	539	111,348	171,201	190,753	23,855	58,261	0	55,461	20	2.70	102,730	20	56,539				
21 MIDDLESEX	741,026	21,153	8,400	15	12,606	268,788	404,801	415,796	57,369	121,277	28,070	132,827	21	2.76	74,002	21	48,544				
22 MONMOUTH	618,842	10,260	5,520	11	4,682	227,047	312,700	254,552	49,596	70,273	4,323	123,080	22	2.73	84,901	22	41,995				
23 OCEAN	532,623	8,352	6,284	6	1,887	211,189	222,701	147,278	35,045	30,542	2,121	93,906	23	2.52	58,328	23	31,860				
24 HUNTERDON	122,998	4,543	4,197	0	187	45,445	67,601	56,009	9,396	13,890	0	24,568	24	2.71	101,247	24	50,578				
25 WARREN	107,077	1,555	984	1	471	40,801	51,199	36,016	7,565	4,997	1,549	20,805	25	2.63	67,620	25	35,540				
26 SUSSEX	146,959	1,739	1,590	0	69	52,174	73,201	43,503	7,102	9,852	0	31,630	26	2.82	75,954	26	35,435				
27 NEW HAVEN	804,175	27,949	11,727	181	10,198	321,201	406,480	361,853	63,476	81,620	31,859	156,389	27	2.50	62,272	27	43,274				
28 MERCER	334,423	21,395	7,455	10	13,931	126,997	178,001	248,042	26,138	67,820	27,558	63,813	28	2.63	76,154	28	39,840				
Total	20,761,515	490,904	232,712	17,783	204,995	7,733,384	9,911,513	9,905,391	1,453,894	3,196,692	880,284	3,969,761	To	2.68	72,062	Tc	53,381				

APPENDIX A: SUMMARY of BPM 2002 SED DATA UPDATE

Difference: New minus Current															Year 2002					Report			Report		
Sum															Mean			Mean							
NYM_CO	HHPOP	GQPOP	GQPOPINS	GQPOPSTR	GQPOPTH	HHNUM	ELF	EMPTOT	EMPRET	EMPOFF	UNVENROL	K12ETOT	NY	HHSIZE	HHINCX	NY	EARNWORK								
1 MANHATTAN	11,076	745	236	128	1,162	7,379	-7,696	-37,433	-6,054	-11,844	1,761	2,515	11	0.00	10,178	1	-16,126								
2 QUEENS	3,610	23	178	3	1,621	7,599	-8,012	-11,988	13,970	2,196	117	-2,686	2	-0.02	6,366	2	-989								
3 BRONX	15,547	566	326	42	3,445	2,089	-807	-6,582	-986	177	600	2,914	3	0.02	4,575	3	-285								
4 BROOKLYN	11,378	158	81	9	4,085	7,824	-4,408	-53,594	-3,292	-8,481	394	-3,906	4	-0.01	5,441	4	2,807								
5 STATEN ISLAND	4,245	100	101	1	466	1,496	501	2,221	6,501	462	161	1,071	5	0.00	7,870	5	2,413								
6 NASSAU	1,427	83	57	2	2,649	1,592	-3,550	-19,795	-3,391	-8,238	267	983	6	-0.01	11,169	6	-1,282								
7 SUFFOLK	1,547	30	45	-4	987	-436	3,237	-66,106	24,760	-957	66	372	7	0.01	9,233	7	-846								
8 WESTCHESTER	4,943	125	72	0	441	1,476	-1,262	-34,636	-2,893	-4,049	357	935	8	0.00	11,704	8	-3,865								
9 ROCKLAND	1,385	40	20	0	83	600	701	-3,872	-380	-970	68	298	9	0.00	10,028	9	-1,734								
10 PUTNAM	269	6	2	0	91	-67	95	802	-301	257	0	53	10	0.01	10,232	10	1,331								
11 ORANGE	1,040	42	20	1	96	-480	795	-1,385	3,685	1,411	26	237	11	0.02	7,387	11	-148								
12 DUTCHESS	-462	-33	-2,056	0	3,940	69	300	2,086	124	441	-34	30	12	-0.01	7,793	12	-1,799								
13 FARIFIELD	7,424	159	47	5	7,818	3,128	3,084	-18,010	-1,511	-7,250	215	1,367	13	0.00	12,229	13	-6,188								
14 BERGEN	5,923	79	50	0	671	2,517	-801	-44,173	-4,195	-12,330	46	955	14	0.00	9,436	14	-2,978								
15 PASSAIC	3,693	87	627	6	-418	1,741	0	-21,314	-1,468	-5,299	71	779	15	-0.01	7,707	15	1,395								
16 HUDSON	3,726	57	18	0	336	5,401	-2,092	-23,239	-1,965	-8,637	66	414	16	-0.04	6,524	16	-3,923								
17 ESSEX	4,834	139	458	-50	3,148	3,054	-1,723	-37,386	-4,235	-12,329	404	738	17	-0.01	3,587	17	1,045								
18 UNION	4,804	72	37	1	139	1,945	301	-8,488	400	-2,502	93	904	18	0.00	8,727	18	-2,081								
19 MORRIS	3,948	78	-1,202	0	1,428	2,821	-100	-29,858	-4,919	-9,197	65	752	19	-0.02	9,431	19	-19,844								
20 SOMERSET	2,260	34	38	0	9	1,484	-901	-35,411	-4,321	-11,233	0	242	20	-0.02	12,645	20	-2,217								
21 MIDDLESEX	9,944	286	161	0	254	2,267	-3,001	-93,188	-7,567	-33,152	377	1,721	21	0.01	3,226	21	-3,032								
22 MONMOUTH	-1,409	-24	62	0	-36	3,440	-1,801	-8,320	671	-3,258	-10	-195	22	-0.05	10,081	22	1,504								
23 OCEAN	-4,142	-63	-48	0	160	-2,826	499	-2,848	2,428	-1,015	-17	-1,107	23	0.01	1,998	23	3,116								
24 HUNTERDON	-827	-26	-23	0	154	-548	-1,701	-3,854	-1,006	-2,092	0	-180	24	0.01	9,196	24	-4,307								
25 WARREN	-1,115	-17	46	0	37	-361	202	2,415	2,007	485	-16	-284	25	-0.01	8,149	25	2,602								
26 SUSSEX	172	4	0	0	84	2	-2	-2,552	2,711	-991	0	2	26	0.00	9,022	26	703								
27 NEW HAVEN	3,427	107	68	-1	5,889	471	7,426	-4,160	-701	-840	136	551	27	0.01	7,461	27	-2,532								
28 MERCER	2,221	142	50	0	94	371	-299	-42,119	-1,874	-9,848	183	521	28	0.01	8,949	28	7,556								
Total	100,888	2,999	-529	143	38,833	54,048	-21,015	-602,787	6,198	-149,083	5,396	9,996	To	-0.01	7,876	Tc	-4,637								
Percent Difference: New minus Current																									
Sum															Mean			Mean							
NYM_CO	HHPOP	GQPOP	GQPOPINS	GQPOPSTR	GQPOPTH	HHNUM	ELF	EMPTOT	EMPRET	EMPOFF	UNVENROL	K12ETOT	NY	HHSIZE	HHINCX	NY	EARNWORK								
1 MANHATTAN	0.7%	1.2%	1.7%	2.0%	3.0%	1.0%	-1.0%	-1.8%	-2.6%	-0.9%	0.8%	1.3%	1	-0.2%	11.5%	1	-19.9%								
2 QUEENS	0.2%	0.1%	1.0%	0.7%	21.7%	1.0%	-0.8%	-2.0%	15.6%	2.0%	0.2%	-0.7%	2	-0.8%	11.8%	2	-2.5%								
3 BRONX	1.2%	1.2%	1.2%	1.2%	24.9%	0.4%	-0.2%	-2.3%	-1.3%	0.2%	1.2%	0.9%	3	0.8%	11.7%	3	-0.8%								
4 BROOKLYN	0.5%	0.4%	0.5%	0.3%	27.3%	0.9%	-0.5%	-7.4%	-3.4%	-5.3%	0.5%	-0.8%	4	-0.4%	11.8%	4	8.1%								
5 STATEN ISLAND	1.0%	1.1%	1.7%	2.1%	16.4%	0.9%	0.2%	1.9%	31.6%	1.9%	1.0%	1.2%	5	0.0%	11.8%	5	6.5%								
6 NASSAU	0.1%	0.4%	0.6%	0.9%	30.6%	0.4%	-0.5%	-3.5%	-3.3%	-5.5%	0.4%	0.4%	6	-0.3%	11.8%	6	-2.7%								
7 SUFFOLK	0.1%	0.1%	0.3%	-0.6%	6.7%	-0.1%	0.4%	-10.5%	23.1%	-0.8%	0.1%	0.1%	7	0.2%	11.6%	7	-2.0%								
8 WESTCHESTER	0.5%	0.5%	0.6%	0.0%	4.1%	0.4%	-0.3%	-8.0%	-4.6%	-3.8%	0.5%	0.5%	8	0.1%	11.8%	8	-7.1%								
9 ROCKLAND	0.5%	0.5%	0.5%		2.4%	0.6%	0.5%	-3.6%	-2.2%	-4.9%	0.5%	0.5%	9	-0.1%	11.8%	9	-3.9%								
10 PUTNAM	0.3%	0.3%	0.2%		6.9%	-0.2%	0.2%	3.3%	-9.1%	6.0%	0.3%	0.3%	10	0.4%	11.8%	10	3.3%								
11 ORANGE	0.3%	0.3%	0.3%	4.0%	1.3%	-0.4%	0.5%	-1.1%	15.2%	6.5%	0.3%	0.3%	11	0.7%	11.8%	11	-0.4%								
12 DUTCHESS	-0.2%	-0.2%	-19.7%		62.2%	0.1%	0.2%	1.8%	0.7%	2.3%	-0.2%	0.1%	12	-0.2%	11.8%	12	-4.5%								
13 FARIFIELD	0.9%	0.9%	0.9%	0.6%	179.1%	1.0%	0.7%	-4.0%	-2.1%	-5.0%	0.9%	0.8%	13	-0.2%	11.8%	13	-10.0%								
14 BERGEN	0.7%	0.7%	0.7%	0.0%	16.6%	0.8%	-0.2%	-9.4%	-5.8%	-9.6%	0.7%	0.6%	14	-0.1%	10.6%	14	-5.9%								
15 PASSAIC	0.8%	0.8%	10.8%	4.3%	-7.9%	1.1%	0.0%	-11.3%	-4.5%	-12.4%	0.8%	0.8%	15	-0.3%	12.2%	15	3.4%								
16 HUDSON	0.6%	0.6%	0.3%	0.0%	10.1%	2.4%	-0.8%	-9.0%	-6.2%	-10.5%	0.6%	0.4%	16	-1.7%	11.8%	16	-8.0%								
17 ESSEX	0.6%	0.6%	4.4%	-4.1%	48.4%	1.1%	-0.5%	-9.8%	-9.9%	-12.0%	1.3%	0.5%	17	-0.5%	5.2%	17	2.3%								
18 UNION	0.9%	0.9%	0.8%	1.3%	4.7%	1.0%	0.1%	-3.6%	1.2%	-4.7%	0.9%	0.9%	18	-0.1%	11.6%	18	-4.3%								
19 MORRIS	0.8%	0.8%	-19.7%	0.0%	47.3%	1.7%	0.0%	-9.8%	-12.2%	-10.1%	0.8%	0.9%	19	-0.8%	9.3%	19	-27.0%								
20 SOMERSET	0.8%	0.7%	0.9%	0.0%	1.7%	1.3%	-0.5%	-18.6%	-18.1%	-19.3%	0.4%	0.4%	20	-0.6%	12.3%	20	-3.9%								
21 MIDDLESEX	1.3%	1.4%	1.9%	0.0%	2.0%	0.8%	-0.7%	-22.4%	-13.2%	-27.3%	1.3%	1.3%	21	0.5%	4.4%	21	-6.2%								
22 MONMOUTH	-0.2%	-0.2%	1.1%	0.0%	-0.8%	1.5%	-0.6%	-3.3%	1.4%	-4.6%	-0.2%	-0.2%	22	-1.8%	11.9%	22	3.6%								
23 OCEAN	-0.8%	-0.8%	-0.8%	0.0%	8.5%	-1.3%	0.2%	-1.9%	6.9%	-3.3%	-0.8%	-1.2%	23	0.5%	3.4%	23	9.8%								
24 HUNTERDON	-0.7%	-0.6%	-0.5%		82.4%	-1.2%	-2.5%	-6.9%	-10.7%	-15.1%		-0.7%	24	0.6%	9.1%	24	-8.5%								
25 WARREN	-1.0%	-1.1%	4.7%	0.0%	7.9%	-0.9%	0.4%	6.7%	26.5%	9.7%	-1.0%	-1.4%	25	-0.2%	12.1%	25	7.3%								
26 SUSSEX	0.1%	0.2%	0.0%		121.7%	0.0%	0.0%	-5.9%	38.2%	-10.1%	0.0%	0.0%	26	0.1%	11.9%	26	2.0%								
27 NEW HAVEN	0.4%	0.4%	0.6%	-0.6%	57.7%	0.1%	1.8%	-1.1%	-1.1%	-1.0%	0.4%	0.4%	27	0.3%	12.0%	27	-5.9%								
28 MERCER	0.7%	0.7%	0.3%	0.0%	0.7%	0.3%	-0.2%	-17.0%	-7.2%	-14.5%	0.7%	0.8%	28	0.3%	11.8%	28	19.0%								
Total	0.5%	0.6%	-0.2%	0.8%	18.9%	0.7%	-0.2%	-6.1%	0.4%	-4.7%	0.6%	0.3%	To	-0.2%	10.9%	Tc	-8.7%								

APPENDIX A: SUMMARY of BPM 2002 SED DATA UPDATE

New SED - BPM Update 2002													Year 2003					Report		Report	
Report													Report					Report			
Sum													Mean					Mean			
NYM_CO	HHPOP	GQPOP	GQPOPINS	GQPOPSTR	GQPOPOTH	HHNUM	ELF	EMPTOT	EMPRET	EMPOFF	UNVENROL	K12ETOT	NY	HHSIZE	HHINCX	NY	EARNWORK				
1 MANHATTAN	1,504,150	60,990	13,910	6,541	40,551	754,504	751,998	2,056,073	225,385	1,297,907	231,525	199,657	1	1.99	98,371	1	64,814				
2 QUEENS	2,196,685	28,744	18,553	470	9,723	790,097	1,011,188	589,528	101,999	112,334	71,351	387,127	2	2.78	60,493	2	38,452				
3 BRONX	1,316,462	46,738	26,655	3,341	16,736	469,145	466,907	277,268	71,728	22,686	50,532	317,318	3	2.81	43,540	3	36,547				
4 BROOKLYN	2,435,140	37,390	16,027	3,291	18,070	889,535	943,906	660,732	91,120	149,042	84,280	507,492	4	2.74	51,748	4	37,693				
5 STATEN ISLAND	450,611	9,121	5,873	47	3,200	162,063	200,901	118,852	26,741	25,039	16,922	88,919	5	2.78	74,850	5	39,406				
6 NASSAU	1,315,856	19,259	9,037	209	10,012	447,784	687,734	547,644	98,109	142,279	63,204	246,983	6	2.94	106,208	6	45,715				
7 SUFFOLK	1,434,960	33,304	15,187	826	17,290	481,489	733,425	565,785	132,219	124,224	60,629	283,296	7	2.98	88,654	7	41,871				
8 WESTCHESTER	913,633	26,543	14,089	10	12,443	341,674	448,942	400,502	60,487	103,373	66,145	173,874	8	2.67	111,278	8	50,913				
9 ROCKLAND	284,406	8,581	4,616	0	3,968	94,161	151,599	104,432	17,330	18,990	13,978	61,321	9	3.02	95,316	9	42,787				
10 PUTNAM	97,896	1,651	610	0	1,041	33,599	57,899	25,382	3,034	4,629	0	19,617	10	2.91	97,285	10	41,093				
11 ORANGE	348,043	15,095	7,151	27	7,918	120,423	161,894	131,062	28,223	23,144	8,619	80,002	11	2.89	70,244	11	34,464				
12 DUTCHESS	272,044	18,844	8,456	0	10,388	102,559	125,503	119,114	17,275	19,806	20,073	55,862	12	2.65	73,602	12	37,914				
13 FARIFIELD	880,984	18,175	5,160	868	12,148	329,431	439,094	427,453	71,175	136,434	25,251	170,824	13	2.67	115,588	13	55,835				
14 BERGEN	887,907	9,661	5,672	18	3,973	336,264	425,702	424,328	67,549	115,472	6,807	152,449	14	2.64	98,684	14	47,826				
15 PASSAIC	480,647	17,712	9,967	227	7,517	164,837	213,999	168,299	31,166	37,896	9,269	95,744	15	2.92	70,576	15	41,929				
16 HUDSON	599,162	8,264	4,689	377	3,201	232,818	263,910	234,923	29,848	73,715	10,533	105,983	16	2.57	61,632	16	44,925				
17 ESSEX	780,854	18,713	9,337	1,023	8,360	286,553	361,878	339,399	38,072	88,998	32,607	156,340	17	2.73	72,182	17	46,707				
18 UNION	522,662	6,697	4,006	67	2,625	187,313	261,301	231,402	35,400	51,872	10,063	98,035	18	2.79	83,698	18	46,872				
19 MORRIS	473,527	9,623	5,047	10	4,562	175,756	257,101	274,314	35,497	82,070	7,759	86,703	19	2.69	110,970	19	53,666				
20 SOMERSET	305,914	5,688	4,959	62	668	113,944	167,800	150,857	19,240	45,542	0	56,370	20	2.68	115,535	20	54,068				
21 MIDDLESEX	756,943	24,052	9,628	16	14,412	271,914	395,799	325,112	50,185	88,910	28,447	135,991	21	2.78	77,235	21	45,519				
22 MONMOUTH	619,958	12,314	6,721	12	5,579	232,306	316,801	248,007	50,640	67,493	4,313	123,793	22	2.67	95,011	22	43,513				
23 OCEAN	538,634	7,445	5,600	5	1,842	211,293	227,399	144,314	37,447	29,506	2,104	94,170	23	2.55	60,339	23	34,976				
24 HUNTERDON	124,317	3,952	3,654	0	296	45,457	64,899	52,509	8,434	11,855	0	24,685	24	2.73	110,541	24	46,258				
25 WARREN	107,618	1,599	1,078	1	519	41,014	51,899	38,835	9,725	5,531	1,533	20,843	25	2.62	75,831	25	38,149				
26 SUSSEX	149,223	1,925	1,754	0	171	52,763	74,001	42,523	10,160	9,222	0	32,094	26	2.83	85,016	26	36,154				
27 NEW HAVEN	812,857	29,001	12,210	185	16,612	322,847	409,699	357,494	62,732	80,738	31,995	158,068	27	2.52	69,800	27	40,742				
28 MERCER	343,204	18,778	6,543	9	12,226	129,304	182,199	204,901	24,141	57,683	27,741	65,021	28	2.65	85,102	28	47,395				
Total	20,954,297	499,859	236,189	17,642	246,051	7,820,847	9,855,377	9,261,044	1,455,061	3,026,390	885,680	3,998,581	To	2.68	79,963	Tc	48,701				
Prior BPM SED																					
Report													Report					Report			
Sum													Mean					Mean			
NYM_CO	HHPOP	GQPOP	GQPOPINS	GQPOPSTR	GQPOPOTH	HHNUM	ELF	EMPTOT	EMPRET	EMPOFF	UNVENROL	K12ETOT	NY	HHSIZE	HHINCX	NY	EARNWORK				
1 MANHATTAN	1,483,860	60,090	13,639	6,398	39,289	741,903	772,699	2,122,560	234,774	1,327,835	229,764	195,894	1	2.00	88,220	1	80,940				
2 QUEENS	2,196,718	26,813	17,129	439	7,464	780,611	1,036,601	609,065	89,349	111,564	71,234	388,844	2	2.81	54,126	2	39,438				
3 BRONX	1,294,624	47,566	27,114	3,403	13,809	466,530	475,707	287,522	73,713	22,818	49,932	313,442	3	2.77	38,964	3	36,830				
4 BROOKLYN	2,424,818	39,294	16,840	3,469	14,970	880,266	964,513	723,264	95,734	159,427	83,886	512,074	4	2.75	46,307	4	34,873				
5 STATEN ISLAND	441,710	9,329	5,969	48	2,843	158,920	203,900	118,135	20,579	24,900	16,761	87,071	5	2.78	66,980	5	36,993				
6 NASSAU	1,311,760	21,644	10,144	233	8,644	445,401	686,293	566,336	101,295	150,233	62,937	245,964	6	2.95	95,016	6	46,996				
7 SUFFOLK	1,425,093	29,274	12,907	708	14,661	480,032	724,794	630,711	107,183	124,925	60,563	280,492	7	2.97	79,449	7	42,718				
8 WESTCHESTER	909,044	23,655	12,553	9	10,710	340,541	447,997	433,664	63,165	107,063	65,788	172,487	8	2.67	99,573	8	54,778				
9 ROCKLAND	282,076	7,729	4,156	0	3,506	93,340	149,202	107,377	17,553	19,790	13,910	60,654	9	3.02	85,298	9	44,520				
10 PUTNAM	96,036	2,220	821	0	1,313	33,317	56,902	24,257	3,295	4,315	0	19,362	10	2.88	87,068	10	39,762				
11 ORANGE	340,483	14,226	6,737	25	7,387	119,128	158,600	131,382	24,307	21,543	8,593	78,145	11	2.86	62,858	11	34,612				
12 DUTCHESS	269,485	18,683	10,427	0	6,339	101,613	123,900	115,308	16,903	19,084	20,107	55,215	12	2.65	65,811	12	39,713				
13 FARIFIELD	868,980	18,065	5,121	865	4,365	324,889	436,720	448,504	73,179	144,663	25,036	168,591	13	2.68	103,310	13	62,023				
14 BERGEN	877,051	11,401	6,690	22	4,049	331,970	426,500	470,054	71,973	128,251	6,761	150,928	14	2.64	89,184	14	50,807				
15 PASSAIC	481,367	11,358	5,820	141	5,269	164,464	214,000	187,921	32,332	42,767	9,198	94,622	15	2.93	63,042	15	40,523				
16 HUDSON	596,753	9,408	5,364	428	3,319	227,127	272,700	258,454	31,848	82,449	10,467	105,958	16	2.63	55,078	16	48,851				
17 ESSEX	771,192	21,474	10,318	1,231	6,510	282,129	359,399	380,617	42,813	102,564	32,203	155,379	17	2.73	68,664	17	45,669				
18 UNION	516,220	7,829	4,692	78	2,956	185,329	258,501	233,248	34,041	53,013	9,970	97,052	18	2.79	74,974	18	48,936				
19 MORRIS	465,324	9,270	6,089	10	3,022	170,884	254,700	303,210	40,316	90,966	7,694	85,108	19	2.72	101,570	19	73,500				
20 SOMERSET	300,798	4,630	4,025	52	539	111,348	171,201	190,753	23,855	58,261	0	55,461	20	2.70	102,730	20	56,539				
21 MIDDLESEX	741,026	21,153	8,400	15	12,606	268,788	404,801	415,796	57,369	121,277	28,070	132,827	21	2.76	74,002	21	48,544				
22 MONMOUTH	618,842	10,260	5,520	11	4,682	227,047	312,700	254,552	49,596	70,273	4,323	123,080	22	2.73	84,901	22	41,995				
23 OCEAN	532,623	8,352	6,284	6	1,887	211,189	222,701	147,278	35,045	30,542	2,121	93,906	23	2.52	58,328	23	31,860				
24 HUNTERDON	122,998	4,543	4,197	0	187	45,445	67,601	56,009	9,396	13,890	0	24,568	24	2.71	101,247	24	50,578				
25 WARREN	107,077	1,555	984	1	471	40,801	51,199	36,016	7,565	4,997	1,549	20,805	25	2.63	67,620	25	35,540				
26 SUSSEX	146,959	1,739	1,590	0	69	52,174	73,201	43,503	7,102	9,852	0	31,630	26	2.82	75,954	26	35,435				
27 NEW HAVEN	804,175	27,949	11,727	181	10,198	321,201	406,480	361,853	63,476	81,620	31,859	156,389	27	2.50	62,272	27	43,274				
28 MERCER	334,423	21,395	7,455	10	13,931	126,997	178,001	248,042	26,138	67,820	27,558	63,813	28	2.63	76,154	28	39,840				
Total	20,761,515	490,904	232,712	17,783	204,995	7,733,384	9,911,513	9,905,391	1,453,894	3,196,692	880,284	3,969,761	To	2.68	72,062	Tc	53,381				

APPENDIX A: SUMMARY of BPM 2002 SED DATA UPDATE

Difference: New minus Current														Year 2003							
Report														Report				Report			
Sum														Mean				Mean			
NYM_CO	HHPOP	GQPOP	GQPOPINS	GQPOPSTR	GQPOPTH	HHNUM	ELF	EMPTOT	EMPRET	EMPOFF	UNVENROL	K12ETOT	NY	HHSIZE	HHINCX	NY	EARNWORK				
1 MANHATTAN	20,290	900	271	143	1,262	12,601	-20,701	-66,487	-9,389	-29,928	1,761	3,763	1	-0.01	10,151	1	-16,126				
2 QUEENS	-33	1,931	1,424	31	2,259	9,486	-25,413	-19,537	12,650	770	117	-1,717	2	-0.03	6,366	2	-966				
3 BRONX	21,838	-828	-459	-62	2,927	2,615	-8,800	-10,254	-1,985	-132	600	3,876	3	0.03	4,576	3	-283				
4 BROOKLYN	10,322	-1,904	-813	-178	3,100	9,269	-20,607	-62,532	-4,614	-10,385	394	-4,582	4	-0.02	5,441	4	2,820				
5 STATEN ISLAND	8,901	-208	-96	-1	357	3,143	-2,999	717	6,162	139	161	1,848	5	0.00	7,870	5	2,413				
6 NASSAU	4,096	-2,385	-1,107	-24	1,368	2,383	1,441	-18,692	-3,186	-7,954	267	1,019	6	-0.01	11,192	6	-1,282				
7 SUFFOLK	9,867	4,030	2,280	118	2,629	1,457	8,631	-64,926	25,036	-701	66	2,804	7	0.01	9,206	7	-847				
8 WESTCHESTER	4,589	2,888	1,536	1	1,733	1,133	945	-33,162	-2,678	-3,680	357	1,387	8	0.00	11,706	8	-3,864				
9 ROCKLAND	2,330	852	460	0	462	821	2,397	-2,945	-223	-800	68	667	9	0.00	10,018	9	-1,734				
10 PUTNAM	1,860	-569	-211	0	-272	282	997	1,125	-261	314	0	255	10	0.03	10,217	10	1,331				
11 ORANGE	7,560	869	414	2	531	1,295	3,294	-320	3,916	1,601	26	1,857	11	0.03	7,385	11	-148				
12 DUTCHESS	2,559	161	-1,971	0	4,049	946	1,603	3,806	372	722	-34	647	12	0.00	7,792	12	-1,799				
13 FARIFIELD	12,004	110	39	3	7,783	4,542	2,374	-21,051	-2,004	-8,229	215	2,233	13	0.00	12,278	13	-6,188				
14 BERGEN	10,856	-1,740	-1,018	-4	-76	4,294	-798	-45,726	-4,424	-12,779	46	1,521	14	0.00	9,500	14	-2,981				
15 PASSAIC	-720	6,354	4,147	86	2,248	373	-1	-19,622	-1,166	-4,871	71	1,122	15	-0.01	7,534	15	1,406				
16 HUDSON	2,409	-1,144	-675	-51	-118	5,691	-8,790	-23,531	-2,000	-8,734	66	25	16	-0.05	6,554	16	-3,926				
17 ESSEX	9,662	-2,761	-981	-208	1,850	4,424	2,479	-41,218	-4,741	-13,566	404	961	17	-0.01	3,518	17	1,038				
18 UNION	6,442	-1,132	-686	-11	-331	1,984	2,800	-1,846	1,359	-1,141	93	983	18	0.00	8,724	18	-2,065				
19 MORRIS	8,203	353	-1,042	0	1,540	4,872	2,401	-28,896	-4,819	-8,896	65	1,595	19	-0.03	9,400	19	-19,834				
20 SOMERSET	5,116	1,058	934	10	129	2,596	-3,401	-39,896	-4,615	-12,719	0	909	20	-0.02	12,805	20	-2,470				
21 MIDDLESEX	15,917	2,899	1,228	1	1,806	3,126	-9,002	-90,684	-7,184	-32,367	377	3,164	21	0.03	3,233	21	-3,025				
22 MONMOUTH	1,116	2,054	1,201	1	897	5,259	4,101	-6,545	1,044	-2,780	-10	713	22	-0.06	10,110	22	1,518				
23 OCEAN	6,011	-907	-684	-1	-45	104	4,698	-2,964	2,402	-1,036	-17	264	23	0.03	2,011	23	3,116				
24 HUNTERDON	1,319	-591	-543	0	109	12	-2,702	-3,500	-962	-2,035	0	117	24	0.03	9,293	24	-4,320				
25 WARREN	541	44	94	0	48	213	700	2,819	2,160	534	-16	38	25	0.00	8,211	25	2,609				
26 SUSSEX	2,264	186	164	0	102	589	800	-980	3,058	-630	0	464	26	0.01	9,063	26	720				
27 NEW HAVEN	8,682	1,052	483	4	6,414	1,646	3,219	-4,359	-744	-882	136	1,679	27	0.01	7,528	27	-2,532				
28 MERCER	8,781	-2,617	-912	-1	-1,705	2,307	4,198	-43,141	-1,997	-10,137	183	1,208	28	0.02	8,949	28	7,556				
Total	192,782	8,955	3,477	-141	41,056	87,463	-56,136	-644,347	1,167	-170,307	5,396	28,820	To	-0.01	7,901	Tc	-4,680				
Percent Difference: New minus Current																					
Report														Report				Report			
Sum														Mean				Mean			
NYM_CO	HHPOP	GQPOP	GQPOPINS	GQPOPSTR	GQPOPTH	HHNUM	ELF	EMPTOT	EMPRET	EMPOFF	UNVENROL	K12ETOT	NY	HHSIZE	HHINCX	NY	EARNWORK				
1 MANHATTAN	1.4%	1.5%	2.0%	2.2%	3.2%	1.7%	-2.7%	-3.1%	-4.0%	-2.3%	0.8%	1.9%	1	-0.3%	11.5%	1	-19.9%				
2 QUEENS	0.0%	7.2%	8.3%	7.1%	30.3%	1.2%	-2.5%	-3.2%	14.2%	0.7%	0.2%	-0.4%	2	-1.2%	11.8%	2	-2.5%				
3 BRONX	1.7%	-1.7%	-1.7%	-1.8%	21.2%	0.6%	-1.8%	-3.6%	-2.7%	-0.6%	1.2%	1.2%	3	1.1%	11.7%	3	-0.8%				
4 BROOKLYN	0.4%	-4.8%	-4.8%	-5.1%	20.7%	1.1%	-2.1%	-8.6%	-4.8%	-6.5%	0.5%	-0.9%	4	-0.6%	11.8%	4	8.1%				
5 STATEN ISLAND	2.0%	-2.2%	-1.6%	-2.1%	12.6%	2.0%	-1.5%	0.6%	29.9%	0.6%	1.0%	2.1%	5	0.0%	11.8%	5	6.5%				
6 NASSAU	0.3%	-11.0%	-10.9%	-10.3%	15.8%	0.5%	0.2%	-3.3%	-3.1%	-5.3%	0.4%	0.4%	6	-0.2%	11.8%	6	-2.7%				
7 SUFFOLK	0.7%	13.8%	17.7%	16.7%	17.9%	0.3%	1.2%	-10.3%	23.4%	-0.6%	0.1%	1.0%	7	0.4%	11.6%	7	-2.0%				
8 WESTCHESTER	0.5%	12.2%	12.2%	11.1%	16.2%	0.3%	0.2%	-7.6%	-4.2%	-3.4%	0.5%	0.8%	8	0.2%	11.8%	8	-7.1%				
9 ROCKLAND	0.8%	11.0%	11.1%		13.2%	0.9%	1.6%	-2.7%	-1.3%	-4.0%	0.5%	1.1%	9	-0.1%	11.7%	9	-3.9%				
10 PUTNAM	1.9%	-25.6%	-25.7%		-20.7%	0.8%	1.8%	4.6%	-7.9%	7.3%		1.3%	10	1.0%	11.7%	10	3.3%				
11 ORANGE	2.2%	6.1%	6.1%	8.0%	7.2%	1.1%	2.1%	-0.2%	16.1%	7.4%	0.3%	2.4%	11	1.1%	11.7%	11	-0.4%				
12 DUTCHESS	0.9%	0.9%	-18.9%		63.9%	0.9%	1.3%	3.3%	2.2%	3.8%	-0.2%	1.2%	12	0.0%	11.8%	12	-4.5%				
13 FARIFIELD	1.4%	0.6%	0.8%	0.3%	178.3%	1.4%	0.5%	-4.7%	-2.7%	-5.7%	0.9%	1.3%	13	-0.1%	11.9%	13	-10.0%				
14 BERGEN	1.2%	-15.3%	-15.2%	-18.2%	-1.9%	1.3%	-0.2%	-9.7%	-6.1%	-10.0%	0.7%	1.0%	14	0.0%	10.7%	14	-5.9%				
15 PASSAIC	-0.1%	55.9%	71.3%	61.0%	42.7%	0.2%	0.0%	-10.4%	-3.6%	-11.4%	0.8%	1.2%	15	-0.4%	12.0%	15	3.5%				
16 HUDSON	0.4%	-12.2%	-12.6%	-11.9%	-3.6%	2.5%	-3.2%	-9.1%	-6.3%	-10.6%	0.6%	0.0%	16	-2.0%	11.9%	16	-8.0%				
17 ESSEX	1.3%	-12.9%	-9.5%	-16.9%	28.4%	1.6%	0.7%	-10.8%	-11.1%	-13.2%	1.3%	0.6%	17	-0.3%	5.1%	17	2.3%				
18 UNION	1.2%	-14.5%	-14.6%	-14.1%	-11.2%	1.1%	1.1%	-0.8%	4.0%	-2.2%	0.9%	1.0%	18	0.1%	11.6%	18	-4.2%				
19 MORRIS	1.8%	3.8%	-17.1%	0.0%	51.0%	2.9%	0.9%	-9.5%	-12.0%	-9.8%	0.8%	1.9%	19	-1.1%	9.3%	19	-27.0%				
20 SOMERSET	1.7%	22.9%	23.2%	19.2%	23.9%	2.3%	-2.0%	-20.9%	-19.3%	-21.8%		1.6%	20	-0.6%	12.5%	20	-4.4%				
21 MIDDLESEX	2.1%	13.7%	14.6%	6.7%	14.3%	1.2%	-2.2%	-21.8%	-12.5%	-26.7%	1.3%	2.4%	21	1.0%	4.4%	21	-6.2%				
22 MONMOUTH	0.2%	20.0%	21.8%	9.1%	19.2%	2.3%	1.3%	-2.6%	2.1%	-4.0%	-0.2%	0.6%	22	-2.1%	11.9%	22	3.6%				
23 OCEAN	1.1%	-10.9%	-10.9%	-16.7%	-2.4%	0.0%	2.1%	-2.0%	6.9%	-3.4%	-0.8%	0.3%	23	1.0%	3.4%	23	9.8%				
24 HUNTERDON	1.1%	-13.0%	-12.9%		58.3%	0.0%	-4.0%	-6.2%	-10.2%	-14.7%		0.5%	24	1.1%	9.2%	24	-8.5%				
25 WARREN	0.5%	2.8%	9.6%	0.0%	10.2%	0.5%	1.4%	7.8%	28.6%	10.7%	-1.0%	0.2%	25	-0.1%	12.1%	25	7.3%				
26 SUSSEX	1.5%	10.7%	10.3%		147.8%	1.1%	1.1%	-2.3%	43.1%	-6.4%		1.5%	26	0.4%	11.9%	26	2.0%				
27 NEW HAVEN	1.1%	3.8%	4.1%	2.2%	62.9%	0.5%	0.8%	-1.2%	-1.2%	-1.1%	0.4%	1.1%	27	0.6%	12.1%	27	-5.9%				
28 MERCER	2.6%	-12.2%	-12.2%	-10.0%	-12.2%	1.8%	2.4%	-17.4%	-7.6%	-14.9%	0.7%	1.9%	28	0.7%	11.8%	28	19.0%				
Total	0.9%	1.8%	1.5%	-0.8%	20.0%	1.1%	-0.6%	-6.5%	0.1%	-5.3%	0.6%	0.7%	To	-0.2%	11.0%	Tc	-8.8%				

APPENDIX A: SUMMARY of BPM 2002 SED DATA UPDATE

New SED - BPM Update 2002																Year 2005																
Report																Report																Report
Sum																Mean																Mean
NYM_CO	HHPOP	GOPOP	GQPOPINS	GOPOPSTR	GQPOPTH	HHNUM	ELF	EMPTOT	EMPRET	EMPOFF	UNVENROL	K12ETOT	NY	HHSIZE	HHINCX	N	EARNWORK															
1 MANHATTAN	1,521,804	61,499	14,024	6,599	40,878	759,293	727,646	2,081,871	231,338	1,309,009	246,001	204,085	1	2.00	98,414	1	64,769															
2 QUEENS	2,243,398	29,279	18,897	482	9,898	795,896	994,914	610,676	105,815	116,328	73,319	398,387	2	2.82	60,506	2	38,444															
3 BRONX	1,321,018	46,455	26,497	3,321	16,631	472,967	458,051	280,920	71,245	23,565	51,171	322,382	3	2.79	43,467	3	36,622															
4 BROOKLYN	2,477,462	37,838	16,219	3,335	18,284	896,658	923,625	641,590	87,417	146,044	86,294	522,221	4	2.76	51,710	4	37,826															
5 STATEN ISLAND	461,414	9,476	6,099	49	3,328	165,402	197,229	128,253	28,888	27,022	17,998	91,781	5	2.79	74,972	5	39,406															
6 NASSAU	1,334,247	18,765	8,838	202	9,725	452,500	693,082	550,769	98,706	143,088	66,186	247,084	6	2.95	106,314	6	45,715															
7 SUFFOLK	1,444,777	35,269	16,309	884	18,074	488,747	741,343	587,691	137,503	128,911	63,341	282,224	7	2.96	88,625	7	41,871															
8 WESTCHESTER	940,803	27,267	14,478	10	12,779	355,460	449,023	405,667	61,399	104,702	71,233	178,422	8	2.65	111,281	8	50,914															
9 ROCKLAND	289,726	9,181	4,938	0	4,242	97,440	168,670	106,336	17,656	19,338	14,846	62,341	9	2.97	95,311	9	42,787															
10 PUTNAM	100,344	1,570	579	0	990	35,127	72,108	26,242	3,135	4,786	0	20,014	10	2.86	97,281	10	41,093															
11 ORANGE	359,535	16,085	7,619	28	8,436	127,887	180,653	136,723	29,444	24,141	9,954	82,465	11	2.81	70,243	11	34,464															
12 DUTCHESS	280,096	19,956	8,895	0	11,060	107,756	132,390	117,633	17,060	19,562	22,320	57,435	12	2.60	73,613	12	37,913															
13 FARFIELD	897,368	18,747	5,321	896	12,534	338,676	455,613	432,178	72,069	137,945	25,847	172,300	13	2.65	115,541	13	55,835															
14 BERGEN	895,606	9,768	5,738	18	4,010	338,928	458,400	434,363	69,252	118,385	7,112	153,284	14	2.64	98,779	14	47,847															
15 PASSAIC	480,935	17,818	10,025	228	7,565	165,890	227,476	167,958	31,104	37,811	9,652	95,445	15	2.90	70,709	15	41,927															
16 HUDSON	613,664	8,462	4,794	385	3,286	235,847	273,790	230,861	29,690	72,346	10,418	108,315	16	2.60	61,653	16	44,885															
17 ESSEX	790,472	18,971	9,480	1,035	8,464	289,469	395,949	336,242	37,838	87,990	34,079	158,410	17	2.73	72,059	17	46,702															
18 UNION	524,065	6,731	4,027	68	2,638	188,965	287,379	211,459	32,531	47,781	10,434	98,136	18	2.77	83,580	18	46,819															
19 MORRIS	484,919	9,836	5,204	11	4,624	178,671	281,029	291,065	37,258	87,360	8,339	88,278	19	2.71	110,928	19	53,835															
20 SOMERSET	309,159	5,740	5,008	63	672	115,485	181,940	173,322	20,714	52,994	0	56,790	20	2.68	115,749	20	55,205															
21 MIDDLESEX	761,398	24,229	9,705	17	14,502	277,190	428,923	339,340	52,429	93,354	29,128	136,177	21	2.75	77,279	21	45,557															
22 MONMOUTH	639,171	12,786	7,012	13	5,760	237,963	367,565	257,229	52,592	69,972	4,480	127,430	22	2.69	95,099	22	43,582															
23 OCEAN	545,383	7,554	5,680	5	1,867	217,379	270,371	151,964	39,197	30,913	2,293	94,581	23	2.51	60,362	23	34,968															
24 HUNTERDON	125,994	4,012	3,711	0	302	46,749	71,737	55,722	8,848	12,369	0	24,957	24	2.69	110,761	24	46,146															
25 WARREN	109,815	1,632	1,106	1	523	42,176	57,483	38,417	9,567	5,481	1,659	21,239	25	2.60	75,951	25	38,141															
26 SUSSEX	150,067	1,935	1,762	0	173	53,734	83,929	43,792	10,438	9,508	0	32,189	26	2.79	85,081	26	36,167															
27 NEW HAVEN	820,697	29,677	12,474	190	17,021	331,247	430,958	358,188	62,852	80,888	33,219	158,099	27	2.48	69,739	27	40,742															
28 MERCER	347,518	19,028	6,630	9	12,388	131,966	200,068	209,397	25,446	59,265	28,200	65,582	28	2.63	85,103	28	47,395															
Total	21,270,855	509,566	241,069	17,849	250,654	7,945,468	10,211,344	9,405,868	1,481,431	3,070,858	927,523	4,060,053	To	2.68	80,043	To	48,741															
Prior BPM SED																																
Report																Report																Report
Sum																Mean																Mean
NYM_CO	HHPOP	GOPOP	GQPOPINS	GOPOPSTR	GQPOPTH	HHNUM	ELF	EMPTOT	EMPRET	EMPOFF	UNVENROL	K12ETOT	NY	HHSIZE	HHINCX	N	EARNWORK															
1 MANHATTAN	1,501,995	60,910	13,819	6,496	39,804	750,958	790,000	2,243,225	244,637	1,407,083	242,830	200,305	1	2.00	88,220	1	79,946															
2 QUEENS	2,206,078	26,813	17,129	439	7,464	783,924	1,086,107	614,957	93,834	112,648	72,034	394,446	2	2.81	54,126	2	36,808															
3 BRONX	1,308,645	40,659	24,311	2,722	11,036	471,581	486,597	289,433	73,940	22,983	50,492	318,322	3	2.77	38,964	3	35,360															
4 BROOKLYN	2,433,325	39,294	16,840	3,469	14,970	883,369	1,013,703	729,081	95,646	160,699	84,829	519,065	4	2.75	46,307	4	32,891															
5 STATEN ISLAND	444,198	9,551	6,032	50	2,918	159,815	221,003	119,790	20,949	25,249	17,344	88,486	5	2.78	66,979	5	35,333															
6 NASSAU	1,313,869	21,644	10,144	233	8,644	447,050	703,003	590,989	105,697	156,774	65,130	243,448	6	2.94	95,015	6	45,339															
7 SUFFOLK	1,435,185	29,276	12,907	709	14,662	484,504	740,603	673,552	114,454	133,411	62,673	279,094	7	2.96	79,448	7	41,068															
8 WESTCHESTER	901,596	23,655	12,553	9	10,710	331,416	457,297	439,699	64,047	108,549	68,082	170,522	8	2.72	99,572	8	52,363															
9 ROCKLAND	281,587	8,213	4,366	0	3,755	92,699	157,100	112,572	18,403	20,750	14,394	60,444	9	3.04	85,298	9	43,862															
10 PUTNAM	95,628	2,220	821	0	1,313	33,219	57,101	27,287	3,708	4,855	0	14,146	10	2.88	87,067	10	37,744															
11 ORANGE	335,064	14,226	6,737	25	7,387	120,639	168,999	142,461	26,356	23,359	9,257	65,410	11	2.78	62,858	11	33,179															
12 DUTCHESS	271,114	20,089	10,908	0	6,916	101,082	125,997	127,455	18,685	21,092	21,661	46,703	12	2.68	65,812	12	39,517															
13 FARFIELD	900,222	18,065	5,121	865	4,365	335,254	451,021	466,741	76,155	150,537	25,909	172,774	13	2.69	103,310	13	60,596															
14 BERGEN	879,278	11,401	6,890	22	4,049	337,174	454,606	479,263	73,383	130,765	6,996	150,962	14	2.61	89,185	14	49,101															
15 PASSAIC	480,451	11,358	5,820	141	5,269	166,224	225,101	188,360	32,407	42,864	9,518	94,229	15	2.89	63,042	15	39,058															
16 HUDSON	622,619	9,408	5,364	428	3,319	236,751	279,696	265,956	32,774	84,840	10,584	102,381	16	2.63	55,078	16	49,576															
17 ESSEX	776,901	21,474	10,318	1,231	6,510	286,634	383,798	382,192	42,993	102,989	33,325	156,132	17	2.71	68,665	17	43,996															
18 UNION	517,035	7,829	4,692	78	2,956	186,428	276,402	239,350	34,932	54,401	10,317	96,976	18	2.77	74,974	18	46,500															
19 MORRIS	463,138	9,270	6,089	10	3,022	171,813	272,702	307,427	40,874	92,232	7,962	84,520	19	2.70	101,568	19	71,483															
20 SOMERSET	300,006	20,675	15,894	107	3,309	110,257	191,099	200,337	25,053	61,187	0	58,096	20	2.72	102,731	20	56,719															
21 MIDDLESEX	762,315	21,153	8,400	15	12,606	277,156	439,397	60,623	128,161	29,048	136,218	21	2.75	74,002	21	47,005																
22 MONMOUTH	640,757	10,260	5,520	11	4,682	233,229	324,598	263,035	51,247	72,615	4,474	127,072	22	2.75	84,901	22	40,634															
23 OCEAN	542,568	8,352	6,284	6	1,887	221,942	221,699	155,511	37,003	32,248	2,285	95,411	23	2.45	58,328	23	30,484															
24 HUNTERDON	128,175	4,543	4,197	0	187	47,641	75,801	59,537	9,989	14,766	0	25,500	24	2.69	101,246	24	48,743															
25 WARREN	110,574	1,555	984	1	471	42,189	55,301	38,188	8,020	5,298	1,669	21,425	25	2.62	67,620	25	34,347															
26 SUSSEX	151,489	1,739	1,590	0	69	53,829	79,800	46,123	7,530	10,448	0	32,519	26	2.81	75,953	26	33,972															
27 NEW HAVEN	816,037	27,949	11,727	181	10,198	324,850	433,381	372,422	65,326	84,001	32,970	149,808	27	2.51	62,272	27	42,066															
28 MERCER	349,280	21,395	7,455	10	13,931	134,296	184,301	262,017	29,202	72,130	28,518	66,320	28	2.60	76,153	28	38,733															
Total	20,969,129	502,976	242,712	17,258	206,409	7,825,923	10,353,316	10,276,357	1,508,167	3,336,934	912,301	3,970,734	To	2.68	72,044	To	52,056															

APPENDIX A: SUMMARY of BPM 2002 SED DATA UPDATE

Difference: New minus Current																	Year 2005																	
Report																	Report																	Report
Sum																	Mean																	Mean
NYM_CO	HHPOP	GQPOP	GQPOPINS	GQPOPSTR	GQPOPOTH	HHNUM	ELF	EMPTOT	EMPRET	EMPOFF	UNVENROL	K12ETOT	NY	HHSIZE	HHINCX	NEARNWORK	NYM_CO	HHPOP	GQPOP	GQPOPINS	GQPOPSTR	GQPOPOTH	HHNUM	ELF	EMPTOT	EMPRET	EMPOFF	UNVENROL	K12ETOT	NY	HHSIZE	HHINCX	NEARNWORK	
1 MANHATTAN	19,809	589	205	103	1,074	8,335	-62,354	-161,354	-13,299	-98,074	3,171	3,780	1	0.00	10,194	1	-15,177																	
2 QUEENS	37,320	2,466	1,768	43	2,434	11,972	-91,193	-4,281	11,981	3,680	3,941	2	0.00	6,380	2	1,636																		
3 BRONX	12,373	5,796	2,186	599	5,595	1,386	-28,546	-8,513	-2,695	582	679	4,060	3	0.02	4,502	3	1,261																	
4 BROOKLYN	44,137	-1,456	-621	-134	3,314	13,289	-90,078	-87,491	-8,229	-14,655	1,465	3,156	4	0.01	5,403	4	4,935																	
5 STATEN ISLAND	17,216	-75	67	-1	410	5,587	-23,774	8,463	7,939	1,773	654	3,295	5	0.01	7,993	5	4,073																	
6 NASSAU	20,378	-2,879	-1,306	-31	1,081	5,450	-9,921	-40,220	-6,991	-13,686	1,056	3,636	6	0.01	11,299	6	376																	
7 SUFFOLK	9,592	5,993	3,402	175	3,412	4,243	740	-85,861	23,049	-4,500	668	3,130	7	-0.01	9,177	7	804																	
8 WESTCHESTER	39,207	3,612	1,925	1	2,069	24,044	-8,274	-34,032	-2,648	-3,847	3,151	7,900	8	-0.07	11,709	8	-1,449																	
9 ROCKLAND	8,139	968	572	0	487	4,741	11,570	-6,236	-747	-1,412	452	1,897	9	-0.06	10,013	9	-1,076																	
10 PUTNAM	4,716	-650	-242	0	-323	1,908	15,007	-1,045	-573	-69	0	5,868	10	-0.02	10,213	10	3,349																	
11 ORANGE	24,471	1,859	882	3	1,049	7,248	11,654	-5,738	3,088	782	697	17,055	11	0.03	7,385	11	1,285																	
12 DUTCHESS	8,982	-133	-2,013	0	4,144	6,674	6,393	-9,822	-1,625	-1,530	659	10,732	12	-0.08	7,801	12	-1,603																	
13 FARIFIELD	-2,854	682	200	31	8,169	3,422	4,592	-34,563	-4,086	-12,592	-62	-474	13	-0.04	12,230	13	-4,761																	
14 BERGEN	16,328	-1,633	-952	-4	-39	1,754	3,794	-44,900	-4,131	-12,380	116	2,322	14	0.03	9,595	14	-1,254																	
15 PASSAIC	484	6,460	4,205	87	2,296	-334	2,375	-20,402	-1,303	-5,053	134	1,216	15	0.01	7,667	15	2,869																	
16 HUDSON	-8,955	-946	-570	-43	-33	-904	-5,906	-35,095	-3,084	-12,494	-166	5,934	16	-0.03	6,575	16	-4,691																	
17 ESSEX	13,571	-2,503	-838	-196	1,954	2,835	12,151	-45,950	-5,155	-14,999	754	2,278	17	0.02	3,395	17	2,705																	
18 UNION	7,030	-1,098	-665	-10	-318	2,537	10,977	-27,891	-2,401	-6,620	117	1,160	18	0.00	8,606	18	318																	
19 MORRIS	21,781	566	-885	1	1,602	6,858	8,327	-16,362	-3,616	-4,872	377	3,758	19	0.02	9,361	19	-17,648																	
20 SOMERSET	9,153	-14,935	-10,886	-44	-2,637	5,228	-9,159	-27,015	-4,339	-8,193	0	-1,306	20	-0.04	13,019	20	-1,514																	
21 MIDDLESEX	-917	3,076	1,305	2	1,896	34	-7,577	-100,057	-8,194	-34,807	80	-41	21	-0.01	3,277	21	-1,448																	
22 MONMOUTH	-1,586	2,526	1,492	2	1,078	4,734	42,967	-5,806	1,345	-2,643	6	358	22	-0.06	10,197	22	2,948																	
23 OCEAN	2,815	-798	-604	-1	-20	-4,563	48,672	-3,547	2,194	-1,335	8	-830	23	0.06	2,034	23	4,484																	
24 HUNTERDON	-2,181	-531	-486	0	115	0	-892	-4,064	-3,815	-1,141	-2,397	0	-543	24	0.00	9,515	24	-2,597																
25 WARREN	-759	77	122	0	52	-13	2,182	229	1,547	183	-10	-186	25	-0.02	8,331	25	3,794																	
26 SUSSEX	-1,422	196	172	0	104	-95	4,129	-2,331	2,908	-940	0	-330	26	-0.02	9,128	26	2,195																	
27 NEW HAVEN	4,660	1,728	747	9	6,823	6,397	-2,423	-14,234	-2,474	-3,113	249	8,291	27	-0.04	7,467	27	-1,324																	
28 MERCER	-1,762	-2,367	-825	-1	-1,543	-2,330	15,767	-52,620	-4,056	-12,865	-318	-738	28	0.03	8,949	28	8,662																	
Total	301,726	6,590	-1,643	591	44,245	119,545	-141,972	-870,489	-26,736	-266,076	15,222	89,319	To	0.00	8,000	Tc	-3,316																	
Percent Difference: New minus Current																																		
Report																	Report																	Report
Sum																	Mean																	Mean
NYM_CO	HHPOP	GQPOP	GQPOPINS	GQPOPSTR	GQPOPOTH	HHNUM	ELF	EMPTOT	EMPRET	EMPOFF	UNVENROL	K12ETOT	NY	HHSIZE	HHINCX	NEARNWORK	NYM_CO	HHPOP	GQPOP	GQPOPINS	GQPOPSTR	GQPOPOTH	HHNUM	ELF	EMPTOT	EMPRET	EMPOFF	UNVENROL	K12ETOT	NY	HHSIZE	HHINCX	NEARNWORK	
1 MANHATTAN	1.3%	1.0%	1.5%	1.6%	2.7%	1.1%	-7.9%	-7.2%	-5.4%	-7.0%	1.3%	1.9%	1	0.2%	11.6%	1	-19.0%																	
2 QUEENS	1.7%	9.2%	10.3%	9.8%	32.6%	1.5%	-8.4%	-0.7%	12.8%	3.3%	1.8%	1.0%	2	0.2%	11.8%	2	4.4%																	
3 BRONX	0.9%	14.3%	9.0%	22.0%	50.7%	0.3%	-5.9%	-2.9%	-3.6%	2.5%	1.3%	1.3%	3	0.7%	11.6%	3	3.6%																	
4 BROOKLYN	1.8%	-3.7%	-3.7%	-3.9%	22.1%	1.5%	-8.9%	-12.0%	-8.6%	-9.1%	1.7%	0.6%	4	0.3%	11.7%	4	15.0%																	
5 STATEN ISLAND	3.9%	-0.8%	1.1%	-2.0%	14.1%	3.5%	-10.8%	7.1%	37.9%	7.0%	3.8%	3.7%	5	0.4%	11.9%	5	11.5%																	
6 NASSAU	1.6%	-13.3%	-12.9%	-13.3%	12.5%	1.2%	-1.4%	-6.8%	-6.6%	-8.7%	1.6%	1.5%	6	0.3%	11.9%	6	0.8%																	
7 SUFFOLK	0.7%	20.5%	26.4%	24.7%	23.3%	0.9%	0.1%	-12.7%	20.1%	-3.4%	1.1%	1.1%	7	-0.2%	11.6%	7	2.0%																	
8 WESTCHESTER	4.3%	15.3%	15.3%	11.1%	19.3%	7.3%	-1.8%	-7.7%	-4.1%	-3.5%	4.6%	4.6%	8	-2.7%	11.8%	8	-2.8%																	
9 ROCKLAND	2.9%	11.8%	13.1%	13.0%	5.1%	7.4%	-5.5%	-4.1%	-6.8%	3.1%	3.1%	3.1%	9	-2.1%	11.7%	9	-2.5%																	
10 PUTNAM	4.9%	-29.3%	-29.5%	-24.6%	5.7%	26.3%	-3.8%	-15.5%	-1.4%	-1.4%	41.5%	41.5%	10	-0.7%	11.7%	10	8.9%																	
11 ORANGE	7.3%	13.1%	13.1%	12.0%	14.2%	6.0%	6.9%	-4.0%	11.7%	3.3%	7.5%	26.1%	11	1.2%	11.7%	11	3.9%																	
12 DUTCHESS	3.3%	-0.7%	-18.5%	59.9%	6.6%	5.1%	-7.7%	-8.7%	-7.3%	3.0%	23.0%	12	-3.1%	11.9%	12	-4.1%																		
13 FARIFIELD	-0.3%	3.8%	3.9%	3.6%	187.1%	1.0%	1.0%	-7.4%	-5.4%	-8.4%	-0.2%	-0.3%	13	-1.4%	11.8%	13	-7.9%																	
14 BERGEN	1.9%	-14.3%	-14.2%	-18.2%	-1.0%	0.5%	0.8%	-9.4%	-5.6%	-9.5%	1.7%	1.5%	14	1.3%	10.8%	14	-2.6%																	
15 PASSAIC	0.1%	56.9%	72.3%	61.7%	43.6%	-0.2%	1.1%	-10.8%	-4.0%	-11.8%	1.4%	1.3%	15	0.3%	12.2%	15	7.3%																	
16 HUDSON	-1.4%	-10.1%	-10.6%	-10.0%	-1.0%	-0.4%	-2.1%	-13.2%	-9.4%	-14.7%	-1.6%	5.8%	16	-1.1%	11.9%	16	-9.5%																	
17 ESSEX	1.7%	-11.7%	-8.1%	-15.9%	30.0%	1.0%	3.2%	-12.0%	-12.0%	-14.6%	2.3%	1.5%	17	0.7%	4.9%	17	6.1%																	
18 UNION	1.4%	-14.0%	-14.2%	-10.8%	1.4%	-10.8%	1.4%	-11.7%	-6.0%	-12.2%	1.1%	1.2%	18	0.1%	11.5%	18	0.7%																	
19 MORRIS	4.7%	6.1%	-14.5%	10.0%	53.0%	4.0%	3.1%	-5.3%	-8.8%	-5.3%	4.7%	4.4%	19	0.7%	9.2%	19	-24.7%																	
20 SOMERSET	3.1%	-72.2%	-68.5%	-41.1%	-79.7%	4.7%	-4.8%	-13.5%	-17.3%	-13.4%	-2.2%	20	-1.6%	12.7%	20	-2.7%																		
21 MIDDLESEX	-0.1%	14.5%	15.5%	13.3%	15.0%	0.0%	-1.7%	-22.8%	-13.5%	-27.2%	0.3%	0.0%	21	-0.2%	4.4%	21	-3.1%																	
22 MONMOUTH	-0.2%	24.6%	27.0%	18.2%	23.0%	2.0%	13.2%	-2.2%	2.6%	-3.6%	0.1%	0.3%	22	-2.2%	12.0%	22	7.3%																	
23 OCEAN	0.5%	-9.6%	-9.6%	-16.7%	-1.1%	-2.1%	22.0%	-2.0%	5.9%	0.4%	-0.9%	23	2.6%	3.5%	23	14.7%																		
24 HUNTERDON	-1.7%	-11.7%	-11.6%	61.5%	-1.9%	-5.4%	-6.4%	-11.4%	-16.2%	-2.1%	24	0.1%	24	0.1%	9.4%	24	-5.3%																	
25 WARREN	-0.7%	5.0%	12.4%	0.0%	11.0%	0.0%	3.9%	0.6%	19.3%	3.5%	-0.6%	-0.9%	25	-0.6%	12.3%	25	11.0%																	
26 SUSSEX	-0.9%	11.3%	10.8%	150.7%	-0.2%	5.2%	-5.1%	38.6%	-9.0%	-1.0%	26	-0.8%	26	-0.8%	12.0%	26	6.5%																	
27 NEW HAVEN	0.6%	6.2%	6.4%	5.0%	66.9%	2.0%	-0.6%	-3.8%	-3.8%	-3.7%	0.8%	5.5%	27	-1.4%	12.0%	27	-3.1%																	
28 MERCER	-0.5%	-11.1%	-11.1%	-10.0%	-11.1%	-1.7%	8.6%	-20.1%	-13.7%	-17.8%	-1.1%	28	1.2%	11.8%	28	22.4%																		
Total	1.4%	1.3%	-0.7%	3.4%	21.4%	1.5%	-1.4%	-8.5%	-1.8%	-8.0%	1.7%	2.2%	To	-0.1%	11.1%	Tc	-6.4%																	

APPENDIX A: SUMMARY of BPM 2002 SED DATA UPDATE

New SED - BPM Update 2002				Year 2010												Report			Report
Sum				Mean												Mean			Mean
NYM_CO	HHPOP	GOPOP	GQPOPINS	GQPOPSTR	GQPOPOTH	HNUM	ELF	EMPTOT	EMPRET	EMPOFF	UNVENROL	K12ETOT	NY	HHSIZE	HHINCX	NY	EARNWORK		
1 MANHATTAN	1,563,358	62,731	14,312	6,723	41,707	781,388	772,405	2,244,018	247,233	1,419,445	253,118	207,432	1	2.00	98,992	1	64,695		
2 QUEENS	2,304,401	29,821	19,259	490	10,080	816,215	1,090,502	640,765	110,663	123,483	77,239	408,084	2	2.82	60,516	2	38,537		
3 BRONX	1,344,425	46,650	26,610	3,334	16,697	481,578	458,888	295,578	75,146	25,549	53,164	327,038	3	2.79	43,403	3	36,603		
4 BROOKLYN	2,527,716	38,199	16,367	3,362	18,470	913,062	996,232	683,529	93,213	156,088	90,204	527,975	4	2.76	51,687	4	37,752		
5 STATEN ISLAND	484,555	10,135	6,523	53	3,556	173,343	225,087	145,810	32,846	30,720	19,059	95,672	5	2.80	75,077	5	39,406		
6 NASSAU	1,356,435	16,788	7,913	181	8,694	459,958	723,887	571,952	102,509	148,595	69,269	239,587	6	2.95	106,349	6	45,715		
7 SUFFOLK	1,503,861	41,779	19,839	1,064	20,872	509,172	785,074	635,360	148,668	139,371	66,021	281,755	7	2.95	88,474	7	41,871		
8 WESTCHESTER	947,075	26,962	14,312	10	12,642	357,770	458,888	419,376	63,968	107,798	73,877	175,670	8	2.65	111,233	8	50,807		
9 ROCKLAND	304,612	11,067	5,951	0	5,118	103,602	177,519	112,371	18,660	20,436	15,944	64,474	9	2.94	95,295	9	42,787		
10 PUTNAM	108,519	1,525	563	0	962	38,515	75,368	27,792	3,319	5,070	0	21,160	10	2.82	97,277	10	41,093		
11 ORANGE	390,118	18,739	8,877	34	9,832	141,150	199,880	146,319	31,506	25,834	11,108	87,897	11	2.76	70,241	11	34,464		
12 DUTCHESS	304,486	23,562	10,268	0	13,292	119,004	135,945	125,791	18,244	20,924	25,010	61,482	12	2.56	73,669	12	37,914		
13 FARIFIELD	925,855	19,852	5,630	949	13,276	354,125	479,462	460,035	76,714	144,763	27,052	169,707	13	2.61	115,546	13	55,835		
14 BERGEN	897,419	9,942	5,843	18	4,084	339,900	474,881	446,512	71,408	122,976	7,268	149,929	14	2.64	98,787	14	47,854		
15 PASSAIC	485,034	18,772	10,555	241	7,980	167,213	231,963	170,777	31,659	38,476	10,016	94,119	15	2.90	70,715	15	41,940		
16 HUDSON	639,873	8,731	4,931	397	3,404	245,803	283,135	242,948	31,212	76,342	10,704	110,312	16	2.60	61,625	16	44,939		
17 ESSEX	798,216	19,464	9,731	1,064	8,676	292,306	410,623	348,569	39,199	91,098	35,438	156,237	17	2.73	71,867	17	46,679		
18 UNION	531,864	6,948	4,151	70	2,726	191,919	292,520	217,021	33,371	48,959	10,846	97,303	18	2.77	83,503	18	46,818		
19 MORRIS	490,587	9,839	5,212	11	4,614	180,963	294,283	311,408	39,462	93,877	8,645	87,104	19	2.71	110,998	19	54,106		
20 SOMERSET	324,445	5,963	5,206	65	6,926	120,899	184,480	203,860	22,859	63,329	0	58,044	20	2.68	115,981	20	56,428		
21 MIDDLESEX	788,159	25,322	10,093	18	15,210	286,329	444,849	357,928	55,298	98,951	29,823	137,555	21	2.75	77,335	21	45,581		
22 MONMOUTH	652,183	12,805	7,021	13	5,774	242,317	380,175	279,460	57,134	76,251	4,514	126,885	22	2.69	95,373	22	43,744		
23 OCEAN	566,157	7,958	5,965	6	1,989	225,323	272,749	167,002	42,984	33,949	2,345	95,656	23	2.51	60,570	23	34,968		
24 HUNTERDON	131,836	4,234	3,935	0	300	48,944	74,704	62,576	9,754	13,722	0	25,562	24	2.69	111,241	24	45,994		
25 WARREN	113,691	1,679	1,148	1	529	43,683	59,569	40,358	10,166	5,743	1,668	21,470	25	2.60	75,841	25	38,156		
26 SUSSEX	154,096	1,977	1,800	0	177	55,188	84,321	48,059	11,348	10,507	0	32,238	26	2.79	85,105	26	36,202		
27 NEW HAVEN	832,460	31,426	13,211	201	18,025	337,624	443,693	378,630	66,437	85,509	34,531	153,250	27	2.47	69,746	27	40,742		
28 MERCER	368,097	20,264	7,060	9	13,195	139,730	205,307	220,092	26,745	61,735	28,909	67,827	28	2.63	85,103	28	47,395		
Total	21,839,533	533,134	252,286	18,314	262,573	8,169,015	10,733,789	10,003,896	1,571,723	3,289,500	965,772	4,081,424	To	2.67	80,110	Tc	48,818		
Prior BPM SED																Report			Report
Sum				Mean												Mean			Mean
NYM_CO	HHPOP	GOPOP	GQPOPINS	GQPOPSTR	GQPOPOTH	HNUM	ELF	EMPTOT	EMPRET	EMPOFF	UNVENROL	K12ETOT	NY	HHSIZE	HHINCX	NY	EARNWORK		
1 MANHATTAN	1,522,005	67,776	14,963	7,894	43,396	760,969	830,000	2,290,980	251,949	1,439,985	247,458	202,558	1	2.00	88,221	1	79,564		
2 QUEENS	2,216,145	28,813	17,129	439	7,464	787,507	1,113,607	628,935	95,970	115,210	74,218	393,935	2	2.81	54,126	2	34,747		
3 BRONX	1,320,434	40,773	24,425	2,722	11,036	475,830	489,204	299,266	76,264	24,543	52,024	319,287	3	2.77	38,964	3	34,038		
4 BROOKLYN	2,446,804	39,294	16,840	3,469	14,970	888,268	1,028,903	740,527	97,076	163,224	87,399	518,874	4	2.75	46,307	4	31,465		
5 STATEN ISLAND	451,487	13,371	6,757	101	4,250	162,438	232,996	125,122	21,881	26,375	17,910	90,133	5	2.78	66,979	5	33,919		
6 NASSAU	1,315,700	21,644	10,144	233	8,644	434,405	710,033	603,907	108,021	160,199	67,252	232,942	6	3.03	95,015	6	44,061		
7 SUFFOLK	1,485,760	29,276	12,907	709	14,662	488,556	770,496	686,249	116,618	135,930	64,712	275,891	7	3.04	79,448	7	39,396		
8 WESTCHESTER	903,213	23,655	12,553	9	10,710	327,562	464,705	456,996	66,566	112,816	70,299	167,261	8	2.76	99,573	8	51,126		
9 ROCKLAND	285,076	9,226	4,818	0	4,275	92,992	164,200	118,018	19,296	21,757	14,864	60,105	9	3.06	85,298	9	42,948		
10 PUTNAM	97,806	2,220	821	0	1,313	33,232	59,600	29,465	4,003	5,242	0	14,160	10	2.94	87,067	10	35,234		
11 ORANGE	343,980	14,226	6,737	25	7,387	125,757	185,101	148,873	27,541	24,413	9,732	65,683	11	2.74	62,858	11	31,619		
12 DUTCHESS	277,233	21,472	11,454	0	7,461	101,416	128,003	132,514	19,422	21,932	22,773	46,913	12	2.73	65,811	12	37,427		
13 FARIFIELD	917,131	18,065	5,121	865	4,365	339,916	471,823	480,919	78,468	152,916	26,752	167,891	13	2.70	103,311	13	60,917		
14 BERGEN	890,494	11,401	6,890	22	4,049	340,281	480,698	494,124	75,658	134,819	7,225	149,206	14	2.62	89,184	14	47,742		
15 PASSAIC	483,060	11,358	5,820	141	5,269	166,725	227,799	191,139	32,884	43,498	9,829	92,463	15	2.90	63,042	15	37,760		
16 HUDSON	651,424	9,408	5,364	428	3,319	241,195	294,101	288,255	35,528	91,958	10,905	104,486	16	2.70	55,078	16	49,352		
17 ESSEX	780,595	21,474	10,318	1,231	6,510	284,055	400,597	385,412	43,356	103,856	34,411	153,104	17	2.75	68,665	17	42,761		
18 UNION	521,384	7,829	4,692	78	2,956	184,697	278,300	244,218	35,643	55,509	10,653	95,444	18	2.82	74,974	18	44,851		
19 MORRIS	466,577	9,270	6,089	10	3,022	171,862	289,101	322,449	42,872	96,739	8,221	83,098	19	2.72	101,573	19	71,085		
20 SOMERSET	321,486	23,276	17,858	118	3,740	116,992	197,401	214,224	26,791	65,427	0	60,969	20	2.75	102,730	20	56,745		
21 MIDDLESEX	796,972	21,153	8,400	15	12,606	287,342	462,498	465,423	64,218	135,750	29,994	138,847	21	2.77	74,002	21	46,079		
22 MONMOUTH	670,204	10,260	5,520	11	4,682	237,500	352,000	277,577	54,085	76,628	4,619	129,645	22	2.82	84,902	22	39,739		
23 OCEAN	579,825	8,352	6,284	6	1,887	239,147	230,302	163,593	38,927	33,926	2,402	99,432	23	2.42	58,328	23	28,540		
24 HUNTERDON	139,395	4,543	4,197	0	187	50,834	83,001	64,246	10,777	15,938	0	27,000	24	2.74	101,247	24	47,899		
25 WARREN	119,787	1,555	984	1	471	44,916	61,404	38,794	8,149	5,383	1,754	22,632	25	2.67	67,620	25	32,994		
26 SUSSEX	162,683	1,739	1,590	0	69	56,888	83,099	49,678	8,110	11,255	0	34,060	26	2.86	75,956	26	33,009		
27 NEW HAVEN	823,755	27,949	11,727	181	10,198	326,384	443,372	375,535	65,867	84,703	34,044	144,248	27	2.52	62,271	27	41,342		
28 MERCER	374,188	21,395	7,455	10	13,931	141,337	192,801	276,276	32,729	75,374	69,089	29,447	28	2.65	76,154	28	37,522		
Total	21,364,603	518,773	247,657	18,718	212,829	7,909,003	10,725,115	10,592,714	1,558,669	3,435,305	938,897	3,959,356	To	2.70	72,004	Tc	51,028		

APPENDIX A: SUMMARY of BPM 2002 SED DATA UPDATE

Difference: New minus Current														Year 2010				Report		Report	
Report														Report		Report					
Sum														Mean		Mean					
NYM_CO	HHPOP	GQPOP	GQPOPINS	GQPOPSTR	GQPOPOTH	HHNUM	ELF	EMPTOT	EMPRET	EMPOFF	UNVENROL	K12ETOT	NY	HHSIZE	HHINCX	N	EARNWORK				
1 MANHATTAN	41,353	-5,045	-651	-1,171	-1,689	20,419	-57,595	-46,962	-4,716	-20,540	5,660	4,874	1	0.00	10,771	1	-14,870				
2 QUEENS	88,256	3,008	2,130	51	2,616	28,708	-23,105	11,830	14,693	8,273	3,021	14,149	2	0.01	6,390	2	3,790				
3 BRONX	23,991	5,877	2,185	612	5,661	5,740	-12,916	-3,688	-1,118	1,006	1,140	7,751	3	0.02	4,439	3	2,565				
4 BROOKLYN	80,912	-1,095	-473	-107	3,500	26,794	-32,671	-56,998	-3,863	-107	2,805	9,101	4	0.01	5,380	4	6,287				
5 STATEN ISLAND	33,068	-3,236	-234	-48	-694	10,905	-7,909	20,688	10,965	4,345	1,149	5,539	5	0.02	8,098	5	5,487				
6 NASSAU	40,735	-4,856	-2,231	-52	50	25,553	13,884	-31,955	-5,512	-11,604	2,017	6,645	6	-0.08	11,334	6	1,653				
7 SUFFOLK	18,101	12,503	6,932	355	6,210	20,616	14,578	-50,889	32,050	3,441	1,309	5,864	7	-0.09	9,026	7	2,476				
8 WESTCHESTER	43,862	3,307	1,759	1	1,932	30,208	-5,817	-37,620	-2,600	-5,018	3,578	8,409	8	-0.11	11,660	8	-319				
9 ROCKLAND	19,536	1,841	1,133	0	843	10,610	13,319	-5,647	-636	-1,321	1,080	4,369	9	-0.12	9,997	9	-161				
10 PUTNAM	10,713	-695	-258	0	-351	5,283	15,768	-1,673	-684	-172	0	7,000	10	-0.13	10,210	10	5,860				
11 ORANGE	46,138	4,513	2,140	9	2,445	15,393	14,779	-2,554	3,965	1,421	1,376	22,214	11	0.03	7,383	11	2,844				
12 DUTCHESS	27,253	2,090	-1,186	0	5,831	17,588	7,942	-6,723	-1,178	-1,008	2,237	14,569	12	-0.18	7,858	12	486				
13 FARIFIELD	8,724	1,787	509	84	8,911	14,209	7,639	-20,884	-1,754	-8,153	300	1,816	13	-0.08	12,236	13	-5,076				
14 BERGEN	6,925	-1,459	-847	-4	35	-381	-5,817	-47,612	-4,250	-11,843	43	723	14	0.02	9,603	14	112				
15 PASSAIC	1,974	7,414	4,735	100	2,711	488	4,164	-20,362	-1,225	-5,022	187	1,656	15	0.00	7,673	15	4,181				
16 HUDSON	-11,551	-677	-433	-31	85	4,608	-10,966	-45,307	-4,316	-15,616	-201	5,826	16	-0.10	6,547	16	-4,414				
17 ESSEX	17,621	-2,010	-587	-167	2,166	8,251	10,026	-36,843	-4,157	-12,758	1,027	3,133	17	-0.02	3,202	17	3,918				
18 UNION	10,480	-881	-541	-8	-230	7,222	14,220	-27,197	-2,272	-6,550	193	1,859	18	-0.05	8,529	18	1,967				
19 MORRIS	24,010	569	-877	1	1,592	9,101	5,182	-11,041	-3,410	-2,862	424	4,006	19	0.00	9,425	19	-16,979				
20 SOMERSET	2,959	-17,313	-12,652	-53	-3,048	3,907	-12,921	-10,364	-3,932	-2,098	0	-2,925	20	-0.06	13,252	20	-317				
21 MIDDLESEX	-8,813	4,169	1,693	3	2,604	-1,013	-17,649	-107,495	-8,920	-36,799	-171	-1,292	21	-0.02	3,334	21	-498				
22 MONMOUTH	-18,021	2,545	1,501	2	1,092	4,817	28,175	1,883	3,049	-377	-105	-2,760	22	-0.13	10,471	22	4,005				
23 OCEAN	-13,668	-394	-319	0	102	-13,824	42,447	3,409	4,057	23	-57	-3,776	23	0.09	2,242	23	6,427				
24 HUNTERDON	-7,559	-309	-262	0	113	-1,890	-8,297	-1,670	-1,023	-2,216	0	-1,438	24	-0.05	9,994	24	-1,905				
25 WARREN	-6,096	124	164	0	58	-1,233	-1,835	1,564	2,017	360	-86	-1,162	25	-0.06	8,221	25	5,162				
26 SUSSEX	-8,587	238	210	0	108	-1,700	1,222	-1,619	3,238	-748	0	-1,822	26	-0.07	9,151	26	3,193				
27 NEW HAVEN	8,705	3,477	1,484	20	7,827	11,240	321	3,095	570	806	487	9,002	27	-0.06	7,474	27	-600				
28 MERCER	-6,901	-1,131	-395	-1	-736	-1,607	12,506	-56,184	-5,984	-13,639	-538	-1,262	28	-0.02	8,949	28	9,873				
Total	474,930	14,361	4,629	-404	49,744	260,012	8,674	-588,818	13,054	-145,805	26,875	122,068	To	-0.03	8,107	Tc	-2,210				

Percent Difference: New minus Current														Year 2010				Report		Report	
Report														Report		Report					
Sum														Mean		Mean					
NYM_CO	HHPOP	GQPOP	GQPOPINS	GQPOPSTR	GQPOPOTH	HHNUM	ELF	EMPTOT	EMPRET	EMPOFF	UNVENROL	K12ETOT	NY	HHSIZE	HHINCX	N	EARNWORK				
1 MANHATTAN	2.7%	-7.4%	-4.4%	-14.8%	-3.9%	2.7%	-6.9%	-2.0%	-1.9%	-1.4%	2.3%	2.4%	1	0.0%	12.2%	1	-18.7%				
2 QUEENS	4.0%	11.2%	12.4%	11.6%	35.0%	3.6%	-2.1%	1.9%	15.3%	7.2%	4.1%	3.6%	2	0.3%	11.8%	2	10.9%				
3 BRONX	1.8%	14.4%	8.9%	22.5%	51.3%	1.2%	-2.6%	-1.2%	-1.5%	4.1%	2.2%	2.4%	3	0.6%	11.4%	3	7.5%				
4 BROOKLYN	3.3%	-2.8%	-2.8%	-3.1%	23.4%	3.0%	-3.2%	-7.7%	-4.0%	-4.4%	3.2%	1.8%	4	0.3%	11.6%	4	20.0%				
5 STATEN ISLAND	7.3%	-24.2%	-3.5%	-47.5%	-16.3%	6.7%	-3.4%	16.5%	50.1%	16.5%	6.4%	6.1%	5	0.6%	12.1%	5	16.2%				
6 NASSAU	3.1%	-22.4%	-22.0%	-22.3%	0.6%	5.9%	2.0%	-5.3%	-5.1%	-7.2%	3.0%	2.9%	6	-2.6%	11.9%	6	3.8%				
7 SUFFOLK	1.2%	42.7%	53.7%	50.1%	42.4%	4.2%	1.9%	-7.4%	27.5%	2.5%	2.0%	2.1%	7	-2.9%	11.4%	7	6.3%				
8 WESTCHESTER	4.9%	14.0%	14.0%	11.1%	18.0%	9.2%	-1.3%	-8.2%	-3.9%	-4.4%	5.1%	5.0%	8	-4.0%	11.7%	8	-0.6%				
9 ROCKLAND	6.9%	20.0%	23.5%		19.7%	11.4%	8.1%	-4.8%	-3.3%	-6.1%	7.3%	7.3%	9	-4.1%	11.7%	9	-0.4%				
10 PUTNAM	11.0%	-31.3%	-31.4%		-26.7%	15.9%	26.5%	-5.7%	-17.1%	-3.3%	49.4%		10	-4.3%	11.7%	10	16.6%				
11 ORANGE	13.4%	31.7%	31.8%	36.0%	33.1%	12.2%	8.0%	-1.7%	14.4%	5.8%	14.1%	33.8%	11	1.0%	11.7%	11	9.0%				
12 DUTCHESS	9.8%	9.7%	-10.4%		78.2%	17.3%	6.2%	-5.1%	-6.1%	-4.6%	9.8%	31.1%	12	-6.4%	11.9%	12	1.3%				
13 FARIFIELD	1.0%	9.9%	9.9%	9.7%	204.1%	4.2%	1.6%	-4.3%	-2.2%	-5.3%	1.1%	1.1%	13	-3.1%	11.8%	13	-8.3%				
14 BERGEN	0.8%	-12.8%	-12.7%	-18.2%	0.9%	-0.1%	-1.2%	-9.6%	-5.6%	-8.8%	0.6%	0.5%	14	0.9%	10.8%	14	0.2%				
15 PASSAIC	0.4%	65.3%	81.4%	70.9%	51.5%	3.3%	1.8%	-10.7%	-3.7%	-11.5%	1.9%	1.8%	15	0.2%	12.2%	15	11.1%				
16 HUDSON	-1.8%	-7.2%	-8.1%	-7.2%	2.6%	1.9%	-3.7%	-15.7%	-12.1%	-17.0%	-1.8%	5.6%	16	-3.6%	11.9%	16	-8.9%				
17 ESSEX	2.3%	-9.4%	-5.7%	-13.6%	33.3%	2.9%	2.5%	-9.6%	-9.6%	-12.3%	3.0%	2.0%	17	-0.6%	4.7%	17	9.2%				
18 UNION	2.0%	-11.3%	-11.5%	-10.3%	-7.8%	3.9%	5.1%	-11.1%	-6.4%	-11.8%	1.8%	1.9%	18	-1.8%	11.4%	18	4.4%				
19 MORRIS	5.1%	6.1%	-14.4%	10.0%	52.7%	5.3%	1.8%	-3.4%	-8.0%	-3.0%	5.2%	4.8%	19	-0.2%	9.3%	19	-23.9%				
20 SOMERSET	0.9%	-74.4%	-70.8%	-44.9%	-81.5%	3.3%	-6.5%	-4.8%	-14.7%	-3.2%	-4.8%		20	-2.3%	12.9%	20	-0.6%				
21 MIDDLESEX	-1.1%	19.7%	20.2%	20.0%	20.7%	-0.4%	-3.8%	-23.1%	-13.9%	-27.1%	-0.6%	-0.9%	21	-0.8%	4.5%	21	-1.1%				
22 MONMOUTH	-2.7%	24.8%	27.2%	18.2%	23.3%	2.0%	8.0%	0.7%	5.6%	-0.5%	-2.3%	-2.1%	22	-4.6%	12.3%	22	10.1%				
23 OCEAN	-2.4%	-4.7%	-5.1%	0.0%	5.4%	-5.8%	18.4%	2.1%	10.4%	0.1%	-2.4%	-3.8%	23	3.8%	2.3%	23	22.5%				
24 HUNTERDON	-5.4%	-6.8%	-6.2%		60.4%	-3.7%	-10.0%	-2.6%	-9.5%	-13.9%		-5.3%	24	-1.8%	9.9%	24	-4.0%				
25 WARREN	-5.1%	8.0%	16.7%	0.0%	12.3%	-2.7%	-3.0%	4.0%	24.8%	6.7%	-4.9%	-5.1%	25	-2.4%	12.2%	25	15.6%				
26 SUSSEX	-5.3%	13.7%	13.2%		156.5%	-3.0%	1.5%	-3.3%	39.9%	-6.6%		-5.3%	26	-2.4%	12.0%	26	9.7%				
27 NEW HAVEN	1.1%	12.4%	12.7%	11.0%	76.8%	3.4%	0.1%	0.8%	0.9%	1.0%	1.4%	6.2%	27	-2.3%	12.0%	27	-1.5%				
28 MERCER	-1.6%	-5.3%	-5.3%	-10.0%	-5.3%	-1.1%	6.5%	-20.3%	-18.3%	-18.1%	-1.8%	-1.8%	28	-0.6%	11.8%	28	26.3%				
Total	2.2%	2.8%	1.9%	-2.2%	23.4%	3.3%	0.1%	-5.6%	0.8%	-4.2%	2.9%	3.1%	To	-1.0%	11.3%	Tc	-4.3%				

APPENDIX A: SUMMARY of BPM 2002 SED DATA UPDATE

New SED - BPM Update 2002												Year 2015											
Report Sum												Report Mean											
NYM_CO	HHPOP	GOPOP	GQPOPINS	GQPOPSTR	GQPOPOTH	HHNUM	ELF	EMPTOT	EMPRET	EMPOFF	UNVENROL	K12ETOT	NY	HHSIZE	HHINCX	NYEARNWORK							
1 MANHATTAN	1,588,241	63,162	14,414	6,775	41,997	794,704	791,702	2,330,608	256,421	1,477,320	259,369	205,694	1	2.00	98,768	1	64,522						
2 QUEENS	2,414,144	30,957	19,993	506	10,447	856,563	1,129,295	661,120	113,650	127,093	81,714	419,536	2	2.82	60,533	2	38,631						
3 BRONX	1,384,736	47,167	26,912	3,369	16,879	496,613	485,585	307,086	77,948	27,038	55,394	331,658	3	2.79	43,352	3	36,574						
4 BROOKLYN	2,583,806	38,506	16,498	3,391	18,615	936,464	1,034,119	717,915	97,872	164,270	93,571	538,038	4	2.76	51,662	4	37,742						
5 STATEN ISLAND	512,464	11,222	7,225	58	3,939	183,160	255,921	161,270	36,324	33,980	20,192	99,568	5	2.80	75,121	5	39,406						
6 NASSAU	1,374,649	15,316	7,225	164	7,928	467,307	735,380	590,952	105,890	153,508	71,838	229,162	6	2.94	106,374	6	45,715						
7 SUFFOLK	1,558,436	46,987	22,607	1,201	23,174	533,508	834,272	680,964	159,333	149,380	68,464	276,740	7	2.92	88,351	7	41,871						
8 WESTCHESTER	949,486	26,613	14,126	10	12,475	358,369	476,966	435,251	66,360	111,900	76,034	169,173	8	2.65	111,231	8	50,812						
9 ROCKLAND	315,839	12,530	6,738	0	5,790	108,020	185,486	116,552	19,356	21,194	16,610	64,445	9	2.92	95,283	9	42,787						
10 PUTNAM	113,164	1,430	530	0	903	40,380	78,628	29,354	3,504	5,355	0	21,175	10	2.80	97,273	10	41,093						
11 ORANGE	413,294	20,833	9,864	38	10,930	151,079	210,790	155,955	33,584	27,536	11,899	89,682	11	2.74	70,240	11	34,464						
12 DUTCHESS	316,965	25,933	11,130	0	14,802	124,558	142,409	134,031	19,438	22,296	26,704	61,743	12	2.54	73,695	12	37,914						
13 FARIFIELD	954,722	20,570	5,835	982	13,754	370,646	495,981	474,193	79,078	149,226	28,001	166,500	13	2.58	115,546	13	55,835						
14 BERGEN	906,919	10,072	5,924	18	4,131	344,101	483,738	459,012	73,303	126,713	7,564	147,444	14	2.64	98,805	14	47,841						
15 PASSAIC	491,925	19,190	10,792	247	8,151	170,009	239,153	172,618	31,974	38,887	10,458	92,964	15	2.89	70,676	15	41,933						
16 HUDSON	661,564	9,044	5,091	416	3,536	255,807	293,502	254,082	32,616	79,879	10,890	111,210	16	2.59	61,584	16	44,945						
17 ESSEX	805,893	19,702	9,855	1,079	8,769	295,654	422,430	357,259	40,137	93,236	37,067	153,615	17	2.73	71,756	17	46,648						
18 UNION	542,913	7,120	4,254	72	2,791	196,638	297,732	220,399	33,873	49,722	11,172	96,673	18	2.76	83,402	18	46,793						
19 MORRIS	494,988	9,905	5,251	11	4,648	182,921	299,028	328,829	41,580	99,066	8,901	85,528	19	2.71	111,076	19	54,160						
20 SOMERSET	338,315	6,204	5,419	68	717	127,076	186,352	236,556	25,597	73,844	0	58,829	20	2.66	116,221	20	57,008						
21 MIDDLESEX	816,278	26,276	10,460	18	15,798	298,481	460,760	375,709	58,034	104,086	30,668	138,586	21	2.73	77,395	21	45,580						
22 MONMOUTH	670,311	13,138	7,218	13	5,908	250,270	391,872	300,813	61,480	82,134	4,614	126,866	22	2.68	95,945	22	43,753						
23 OCEAN	591,840	8,341	6,245	6	2,088	237,441	279,748	181,553	46,651	37,024	2,448	97,275	23	2.49	60,788	23	34,975						
24 HUNTERDON	134,956	4,344	4,036	0	309	50,362	77,516	68,557	10,469	15,123	0	25,473	24	2.68	111,232	24	45,993						
25 WARREN	118,432	1,744	1,202	1	544	45,842	61,704	42,264	10,552	6,052	1,709	21,749	25	2.58	76,037	25	38,115						
26 SUSSEX	158,873	2,040	1,857	0	183	57,222	87,012	52,514	12,255	11,496	0	32,284	26	2.78	84,990	26	36,213						
27 NEW HAVEN	853,467	32,528	13,676	208	18,653	348,815	558,211	391,205	68,645	88,347	36,232	149,518	27	2.45	69,747	27	40,742						
28 MERCER	379,903	20,936	7,294	10	13,633	145,191	211,465	228,899	27,816	63,381	29,425	68,111	28	2.62	85,102	28	47,396						
Total	22,446,523	551,810	261,671	18,661	271,492	8,427,201	11,106,757	10,465,420	1,643,740	3,439,086	1,000,938	4,079,239	To	2.66	80,004	Tc	48,765						
Prior BPM SED																							
Report Sum												Report Mean											
NYM_CO	HHPOP	GOPOP	GQPOPINS	GQPOPSTR	GQPOPOTH	HHNUM	ELF	EMPTOT	EMPRET	EMPOFF	UNVENROL	K12ETOT	NY	HHSIZE	HHINCX	NYEARNWORK							
1 MANHATTAN	1,536,671	68,430	15,107	7,976	43,814	768,310	849,893	2,348,786	256,177	1,482,856	252,089	201,031	1	2.00	88,221	1	79,899						
2 QUEENS	2,240,930	26,813	17,129	439	7,464	796,330	1,117,602	640,002	97,668	117,246	75,784	391,508	2	2.81	54,126	2	32,929						
3 BRONX	1,332,221	40,887	24,539	2,722	11,036	480,070	491,810	306,949	78,078	25,770	53,120	316,598	3	2.77	38,964	3	32,898						
4 BROOKLYN	2,461,723	39,294	16,840	3,469	14,970	893,689	1,044,303	750,071	98,328	165,331	89,241	513,097	4	2.75	46,307	4	30,324						
5 STATEN ISLAND	459,469	18,266	7,675	166	5,962	165,303	248,407	128,762	22,518	27,144	18,420	91,045	5	2.78	66,979	5	32,709						
6 NASSAU	1,320,746	21,644	10,144	233	8,644	435,340	709,794	618,788	110,679	164,136	69,166	220,983	6	3.03	95,015	6	43,401						
7 SUFFOLK	1,531,426	29,276	12,907	709	14,662	496,188	807,502	693,674	117,876	137,409	66,557	268,607	7	3.09	79,448	7	37,921						
8 WESTCHESTER	904,457	23,655	12,553	9	10,710	323,892	479,399	467,020	68,021	115,295	72,296	160,944	8	2.79	99,572	8	50,882						
9 ROCKLAND	289,716	12,471	6,249	0	5,946	93,460	170,397	123,404	20,174	22,747	15,286	59,306	9	3.10	85,299	9	42,607						
10 PUTNAM	100,628	2,220	821	0	1,313	33,316	62,100	32,113	4,363	5,713	0	19,005	10	3.02	87,068	10	33,523						
11 ORANGE	359,714	14,226	6,737	25	7,387	130,894	193,500	156,028	28,867	25,585	10,249	77,253	11	2.75	62,859	11	30,404						
12 DUTCHESS	282,878	25,056	12,701	0	8,933	101,828	133,003	140,076	20,531	23,181	23,981	55,330	12	2.78	65,811	12	35,558						
13 FARIFIELD	940,239	18,065	5,121	865	4,365	351,531	487,425	491,741	80,230	156,367	27,513	163,657	13	2.68	103,311	13	61,835						
14 BERGEN	889,301	11,401	6,890	22	4,049	342,454	487,196	502,421	76,929	137,084	7,430	144,974	14	2.60	89,184	14	46,410						
15 PASSAIC	482,563	11,434	5,860	142	5,302	167,555	236,501	195,102	33,567	44,402	10,108	89,891	15	2.88	63,029	15	36,617						
16 HUDSON	676,273	9,408	5,364	428	3,319	242,500	313,100	301,229	37,121	96,100	11,135	113,568	16	2.79	55,078	16	49,269						
17 ESSEX	779,313	21,586	10,371	1,236	6,546	281,850	416,198	391,276	44,018	105,430	35,391	148,746	17	2.77	68,665	17	41,777						
18 UNION	531,597	7,829	4,692	78	2,956	187,968	283,401	252,753	36,888	57,448	10,957	94,656	18	2.83	74,974	18	43,597						
19 MORRIS	470,356	9,270	6,089	10	3,022	172,241	293,401	335,332	44,590	100,600	8,455	81,492	19	2.73	101,571	19	71,368						
20 SOMERSET	357,693	24,087	18,532	125	3,849	129,213	206,402	225,652	28,220	68,918	0	65,687	20	2.77	102,730	20	56,924						
21 MIDDLESEX	826,408	21,093	8,380	15	12,571	296,494	488,900	493,137	68,043	143,833	30,848	139,938	21	2.79	74,002	21	45,432						
22 MONMOUTH	693,473	10,260	5,520	11	4,682	243,919	373,003	291,644	56,823	80,512	4,751	130,445	22	2.84	84,901	22	39,100						
23 OCEAN	612,033	8,368	6,297	6	1,889	251,794	241,999	169,788	40,398	35,209	2,530	102,039	23	2.43	58,328	23	26,848						
24 HUNTERDON	149,268	4,543	4,197	0	187	53,872	91,099	69,202	11,609	17,162	0	28,071	24	2.77	101,250	24	47,501						
25 WARREN	128,308	1,555	984	1	471	47,679	66,700	39,544	8,306	5,485	1,847	23,568	25	2.69	67,619	25	32,096						
26 SUSSEX	173,679	1,739	1,590	0	69	60,252	90,301	53,696	8,766	12,164	0	35,355	26	2.88	75,954	26	32,237						
27 NEW HAVEN	828,204	27,949	11,727	181	10,198	325,893	449,475	378,687	66,427	85,418	35,012	144,582	27	2.54	62,272	27	40,757						
28 MERCER	391,163	21,395	7,455	10	13,931	147,365	240,399	290,916	35,786	78,351	30,285	70,103	28	2.65	76,154	28	36,758						
Total	21,750,450	532,220	252,271	18,878	218,247	8,021,200	11,037,210	10,887,793	1,601,001	3,536,896	962,451	3,951,479	To	2.71	72,057	Tc	50,441						

APPENDIX A: SUMMARY of BPM 2002 SED DATA UPDATE

Difference: New minus Current														Year 2015														
Report														Report														Report
Sum														Mean														Mean
NYM_CO	HHPOP	GQPOP	GQPOPINS	GQPOPSTR	GQPOPOTH	HHNUM	ELF	EMPTOT	EMPRET	EMPOFF	UNVENROL	K12ETOT	NY	HHSIZE	HHINCX	N	EARNWORK											
1 MANHATTAN	51,570	-5,268	-693	-1,201	-1,817	26,394	-58,191	-18,178	244	-5,536	7,280	4,663	1	0.00	10,547	1	-15,377											
2 QUEENS	173,214	4,144	2,864	67	2,983	60,233	21,118	15,982	9,847	5,930	28,028	28,028	2	0.00	6,407	2	5,702											
3 BRONX	52,515	6,280	2,373	647	5,843	16,543	-6,225	137	-130	1,268	2,274	15,060	3	0.01	4,388	3	3,675											
4 BROOKLYN	122,083	-788	-342	-78	3,645	42,775	-10,184	-32,156	-456	-1,061	4,330	24,941	4	0.00	5,355	4	7,418											
5 STATEN ISLAND	52,995	-7,044	-450	-108	-2,023	17,857	7,514	32,508	13,806	6,836	1,772	8,523	5	0.02	8,142	5	6,697											
6 NASSAU	53,903	-6,328	-2,919	-69	-716	31,967	25,586	-27,936	-4,789	-10,628	2,672	8,179	6	-0.09	11,359	6	2,674											
7 SUFFOLK	27,010	17,711	9,700	492	8,512	37,320	26,770	-12,710	41,457	11,971	1,907	8,133	7	-0.17	8,903	7	3,950											
8 WESTCHESTER	45,029	2,958	1,573	1	1,765	34,477	-2,433	-31,769	-1,661	-3,395	3,738	8,229	8	-0.14	11,659	8	-70											
9 ROCKLAND	26,123	59	489	0	-156	14,560	15,089	-6,852	-818	-1,553	1,324	5,139	9	-0.18	9,984	9	180											
10 PUTNAM	12,536	-790	-291	0	-410	7,064	16,528	-2,759	-859	-358	0	2,170	10	-0.22	10,205	10	7,570											
11 ORANGE	53,580	6,607	3,127	13	3,543	20,185	17,290	-73	4,717	1,951	1,650	12,429	11	-0.01	7,381	11	4,060											
12 DUTCHESS	34,087	877	-1,571	0	5,869	22,730	9,406	-6,045	-1,093	-885	2,723	6,413	12	-0.23	7,884	12	2,355											
13 FARIFIELD	14,483	2,505	714	117	9,389	19,115	8,556	-17,548	-1,152	-7,141	488	2,843	13	-0.10	12,235	13	-6,000											
14 BERGEN	17,618	-1,329	-766	-4	82	1,647	-3,458	-43,409	-3,626	-10,371	134	2,470	14	0.04	9,621	14	1,431											
15 PASSAIC	9,362	7,756	4,932	105	2,849	2,454	2,652	-22,484	-1,593	-5,515	350	3,073	15	0.01	7,647	15	5,316											
16 HUDSON	-14,709	-364	-273	-12	217	13,307	-19,598	-47,147	-4,505	-16,221	-245	-2,358	16	-0.20	6,505	16	-4,323											
17 ESSEX	26,580	-1,884	-516	-157	2,223	13,804	6,232	-34,017	-3,881	-12,194	1,676	4,869	17	-0.04	3,091	17	4,871											
18 UNION	11,316	-709	-438	-6	-165	8,670	14,331	-32,354	-3,015	-7,726	215	2,017	18	-0.07	8,428	18	3,196											
19 MORRIS	24,632	635	-838	1	1,626	10,680	5,627	-6,503	-3,010	-1,534	446	4,036	19	-0.02	9,505	19	-17,207											
20 SOMERSET	-19,378	-17,883	-13,113	-57	-3,132	-2,137	-20,050	10,904	-2,623	4,926	0	-6,858	20	-0.11	13,492	20	84											
21 MIDDLESEX	-10,130	5,183	2,080	3	3,227	1,987	-28,140	-117,428	-10,009	-39,747	-180	-1,352	21	-0.05	3,393	21	148											
22 MONMOUTH	-23,162	2,878	1,698	2	1,226	6,351	18,869	9,169	4,657	1,622	-137	-3,579	22	-0.17	11,044	22	4,654											
23 OCEAN	-20,193	-27	-52	0	199	-14,353	37,749	11,765	6,253	1,815	-82	-4,764	23	0.06	2,460	23	8,128											
24 HUNTERDON	-14,312	-199	-161	0	122	-3,510	-13,583	-645	-1,140	-2,039	0	-2,598	24	-0.09	9,982	24	-1,508											
25 WARREN	-9,876	189	218	0	73	-1,837	-4,996	2,720	2,246	567	-138	-1,819	25	-0.11	8,418	25	6,018											
26 SUSSEX	-14,806	301	267	0	114	-3,030	-3,289	-1,182	3,489	-668	0	-3,071	26	-0.11	9,037	26	3,976											
27 NEW HAVEN	25,263	4,579	1,949	27	8,455	22,922	8,736	12,518	2,218	2,929	1,220	4,936	27	-0.10	7,475	27	-15											
28 MERCER	-11,260	-459	-161	0	-298	-2,174	7,066	-62,017	-7,970	-14,970	-860	-1,992	28	-0.04	8,948	28	10,638											
Total	696,073	19,590	9,400	-217	53,245	406,001	69,547	-422,373	42,739	-97,810	38,487	127,760	To	-0.05	7,947	Td	-1,676											

Percent Difference: New minus Current																												
Report														Report														Report
Sum														Mean														Mean
NYM_CO	HHPOP	GQPOP	GQPOPINS	GQPOPSTR	GQPOPOTH	HHNUM	ELF	EMPTOT	EMPRET	EMPOFF	UNVENROL	K12ETOT	NY	HHSIZE	HHINCX	N	EARNWORK											
1 MANHATTAN	3.4%	-7.7%	-4.6%	-15.1%	-4.1%	3.4%	-6.8%	-0.8%	0.1%	-0.4%	2.9%	2.3%	1	-0.1%	12.0%	1	-19.2%											
2 QUEENS	7.7%	15.5%	16.7%	15.3%	40.0%	7.6%	1.0%	3.3%	16.4%	8.4%	7.8%	7.2%	2	0.1%	11.8%	2	17.3%											
3 BRONX	3.9%	15.4%	9.7%	23.8%	52.9%	3.4%	-1.3%	0.0%	-0.2%	4.9%	4.3%	4.8%	3	0.5%	11.3%	3	11.2%											
4 BROOKLYN	5.0%	-2.0%	-2.0%	-2.2%	24.3%	4.8%	-1.0%	-4.3%	-0.5%	-0.6%	4.9%	4.9%	4	0.2%	11.6%	4	24.5%											
5 STATEN ISLAND	11.5%	-38.6%	-5.9%	-65.1%	-33.9%	10.8%	3.0%	25.2%	61.3%	25.2%	9.6%	9.4%	5	0.7%	12.2%	5	20.5%											
6 NASSAU	4.1%	-29.2%	-28.8%	-29.6%	-8.3%	7.3%	3.6%	-4.5%	-4.3%	-6.5%	3.9%	3.7%	6	-3.0%	12.0%	6	6.2%											
7 SUFFOLK	1.8%	60.5%	75.2%	69.4%	58.1%	7.5%	3.3%	-1.8%	35.2%	8.7%	2.9%	3.0%	7	-5.4%	11.2%	7	10.4%											
8 WESTCHESTER	5.0%	12.5%	12.5%	11.1%	16.5%	10.6%	-0.5%	-6.8%	-2.4%	-2.9%	5.2%	5.1%	8	-5.1%	11.7%	8	-0.1%											
9 ROCKLAND	9.0%	0.5%	7.8%	-2.6%	15.6%	8.9%	5.6%	-5.6%	-4.1%	-6.8%	8.7%	8.7%	9	-5.7%	11.7%	9	0.4%											
10 PUTNAM	12.5%	-35.6%	-35.4%	-31.2%	21.2%	26.6%	8.6%	-19.7%	-6.3%	-11.4%	11.4%	10	-7.2%	11.7%	10	22.6%												
11 ORANGE	14.9%	46.4%	46.4%	52.0%	48.0%	15.4%	8.9%	0.0%	16.3%	7.6%	16.1%	16.1%	11	-0.5%	11.7%	11	13.4%											
12 DUTCHESS	12.1%	3.5%	-12.4%	65.7%	22.3%	7.1%	-4.3%	-5.3%	-3.8%	11.4%	11.6%	12	-8.4%	12.0%	12	6.6%												
13 FARIFIELD	1.5%	13.9%	13.9%	13.5%	215.1%	5.4%	1.8%	-3.6%	-1.4%	-4.6%	1.8%	1.7%	13	-3.7%	11.8%	13	-9.7%											
14 BERGEN	2.0%	-11.7%	-11.4%	-18.2%	2.0%	0.5%	-0.7%	-8.6%	-4.7%	-7.6%	1.8%	1.7%	14	1.5%	10.8%	14	3.1%											
15 PASSAIC	1.9%	67.8%	84.2%	73.9%	53.7%	1.5%	1.1%	-11.5%	-4.7%	-12.4%	3.5%	3.4%	15	0.5%	12.1%	15	14.5%											
16 HUDSON	-2.2%	-3.9%	-5.1%	-2.8%	6.5%	5.5%	-6.3%	-15.7%	-12.1%	-16.9%	-2.2%	-2.1%	16	-7.3%	11.8%	16	-8.8%											
17 ESSEX	3.4%	-8.7%	-5.0%	-12.7%	34.0%	4.9%	1.5%	-8.7%	-8.8%	-11.6%	4.7%	3.3%	17	-1.4%	4.5%	17	11.7%											
18 UNION	2.1%	-9.1%	-9.3%	-7.7%	5.6%	4.6%	5.1%	-12.8%	-8.2%	-13.4%	2.0%	2.1%	18	-2.4%	11.2%	18	7.3%											
19 MORRIS	5.2%	6.9%	-13.8%	10.0%	53.8%	6.2%	1.9%	-1.9%	-6.8%	-1.5%	5.3%	5.0%	19	-0.9%	9.4%	19	-24.1%											
20 SOMERSET	-5.4%	-74.2%	-70.8%	-45.6%	-81.4%	-1.7%	-9.7%	4.8%	-9.3%	7.1%	-10.4%	20	-3.8%	13.1%	20	0.1%												
21 MIDDLESEX	-1.2%	24.6%	24.8%	20.0%	25.7%	0.7%	-5.8%	-23.8%	-14.7%	-27.6%	-0.6%	-1.0%	21	-1.9%	4.6%	21	0.3%											
22 MONMOUTH	-3.3%	28.1%	30.8%	18.2%	26.2%	2.6%	5.1%	3.1%	8.2%	2.0%	-2.9%	-2.7%	22	-5.8%	13.0%	22	11.9%											
23 OCEAN	-3.3%	-0.3%	-0.8%	0.0%	10.5%	-5.7%	15.6%	6.9%	15.5%	5.2%	-3.2%	-4.7%	23	2.6%	4.2%	23	30.3%											
24 HUNTERDON	-9.6%	-4.4%	-3.8%	65.2%	-6.5%	-14.9%	-0.9%	-9.8%	-11.9%	-9.3%	24	-3.2%	24	-3.2%	9.9%	24	-3.2%											
25 WARREN	-7.7%	12.2%	22.2%	0.0%	15.5%	-3.9%	-7.5%	6.9%	27.0%	10.3%	-7.5%	25	-4.0%	12.4%	25	18.8%												
26 SUSSEX	-8.5%	17.3%	16.8%	165.2%	-5.0%	-3.6%	-2.2%	39.8%	-5.5%	-8.7%	26	-3.7%	26	-3.7%	11.9%	26	12.3%											
27 NEW HAVEN	3.1%	16.4%	16.8%	14.9%	82.9%	7.0%	1.9%	3.3%	3.3%	3.4%	3.5%	3.4%	27	-3.8%	12.0%	27	0.0%											
28 MERCER	-2.9%	-2.1%	-2.2%	0.0%	-2.1%	-1.5%	3.5%	-21.3%	-22.3%	-19.1%	-2.8%	-2.8%	28	-1.4%	11.8%	28	28.9%											
Total	3.2%	3.7%	3.7%	-1.1%	24.4%	5.1%	0.6%	-3.9%	2.7%	-2.8%	4.0%	3.2%	To	-1.8%	11.0%	Td	-3.3%											

APPENDIX A: SUMMARY of BPM 2002 SED DATA UPDATE

New SED - BPM Update 2002										Year 2020										
Report										Report										Report
Sum										Mean										Mean
NYM_CO	HHPOP	GOPOP	GQPOPINS	GQPOPSTR	GQPOPOTH	HHNUM	ELF	EMPTOT	EMPRET	EMPOFF	UNVENROL	K12ETOT	NY	HHSIZE	HHINCX	NYEARNWORK				
1 MANHATTAN	1,612,743	63,803	14,560	6,835	42,420	809,999	804,830	2,420,243	265,929	1,538,701	263,985	201,368	1	1.99	98,304	1	64,363			
2 QUEENS	2,577,786	32,911	21,262	540	11,105	930,868	1,184,806	682,243	117,345	131,080	88,941	431,782	2	2.77	60,253	2	38,618			
3 BRONX	1,436,126	48,334	27,601	3,452	17,284	520,579	520,579	319,232	81,230	29,177	58,854	332,596	3	2.76	43,294	3	36,568			
4 BROOKLYN	2,648,951	39,155	16,778	3,447	18,930	966,598	1,081,772	757,903	103,792	172,797	98,586	532,709	4	2.74	51,628	4	37,687			
5 STATEN ISLAND	541,792	12,201	7,854	64	4,285	196,532	260,123	175,982	39,633	37,082	21,297	101,733	5	2.76	75,161	5	39,406			
6 NASSAU	1,390,815	14,510	6,838	158	7,513	475,112	741,215	604,718	108,372	157,105	74,628	216,901	6	2.93	106,391	6	45,715			
7 SUFFOLK	1,610,147	50,490	24,489	1,290	24,708	558,948	862,448	721,952	168,918	158,365	71,719	268,192	7	2.88	88,248	7	41,871			
8 WESTCHESTER	959,049	26,651	14,147	10	12,495	362,018	488,031	450,706	68,695	115,895	79,145	160,435	8	2.65	111,233	8	50,817			
9 ROCKLAND	328,835	13,710	7,371	0	6,339	112,773	192,446	121,980	20,256	22,178	17,406	63,134	9	2.92	95,276	9	42,787			
10 PUTNAM	119,018	1,279	473	0	806	42,579	81,472	30,951	3,696	5,647	0	20,878	10	2.80	97,268	10	41,094			
11 ORANGE	443,986	23,042	10,911	42	12,088	162,414	224,224	165,691	35,684	29,261	12,761	90,610	11	2.73	70,239	11	34,464			
12 DUTCHESS	334,595	28,318	12,037	0	16,280	131,977	149,242	142,631	20,688	23,726	28,664	61,369	12	2.54	73,713	12	37,914			
13 FARIFIELD	978,235	21,042	5,971	1,005	14,069	384,002	512,978	484,017	80,720	152,315	29,027	162,757	13	2.55	115,547	13	55,835			
14 BERGEN	921,726	10,102	5,949	18	4,134	351,052	493,704	473,862	75,475	130,831	7,993	146,731	14	2.63	98,830	14	47,812			
15 PASSAIC	504,425	18,967	10,671	246	8,054	176,262	254,080	175,261	32,425	39,474	11,083	93,326	15	2.86	70,581	15	41,920			
16 HUDSON	679,315	9,272	5,225	427	3,619	264,740	318,194	266,676	34,230	83,740	11,286	111,949	16	2.57	61,535	16	44,906			
17 ESSEX	821,603	19,832	9,928	1,086	8,817	302,968	436,352	367,678	41,243	95,786	39,463	153,486	17	2.71	71,591	17	46,609			
18 UNION	558,127	7,211	4,309	74	2,826	204,340	311,196	227,251	34,885	51,281	11,776	97,337	18	2.73	83,288	18	46,739			
19 MORRIS	503,927	10,185	5,406	11	4,769	187,103	309,996	348,526	44,135	104,681	9,217	85,325	19	2.69	111,241	19	54,118			
20 SOMERSET	353,332	6,539	5,718	70	752	135,016	209,154	268,180	28,430	83,769	0	60,106	20	2.62	116,857	20	57,301			
21 MIDDLESEX	842,769	26,913	10,666	19	16,229	312,589	473,654	395,475	61,064	109,676	31,721	140,035	21	2.70	77,392	21	45,564			
22 MONMOUTH	685,249	13,560	7,444	13	6,103	257,749	415,189	324,775	66,116	88,421	4,728	126,973	22	2.66	96,540	22	43,649			
23 OCEAN	619,887	8,526	6,383	6	2,135	253,222	300,851	196,388	50,263	40,230	2,589	99,609	23	2.45	60,955	23	34,995			
24 HUNTERDON	139,039	4,439	4,127	0	313	52,459	83,384	73,921	11,078	16,446	0	25,703	24	2.65	111,183	24	46,018			
25 WARREN	125,046	1,851	1,278	1	574	49,462	66,441	44,346	10,980	6,388	1,778	22,511	25	2.53	75,992	25	38,074			
26 SUSSEX	166,015	2,136	1,945	0	191	60,667	95,965	56,619	13,082	12,375	0	32,979	26	2.74	84,949	26	36,219			
27 NEW HAVEN	872,812	33,196	13,956	213	19,041	360,479	465,677	401,811	70,509	90,739	37,558	145,871	27	2.42	69,747	27	40,742			
28 MERCER	388,781	21,326	7,432	10	13,882	149,604	225,587	241,158	29,307	66,135	30,385	68,240	28	2.60	85,103	28	47,395			
Total	23,164,130	569,501	270,729	19,037	279,761	8,771,736	11,563,590	10,940,176	1,718,180	3,593,301	1,044,590	4,054,645	To	2.64	79,750	Tc	48,690			
Prior BPM SED																				
Report										Report										Report
Sum										Mean										Mean
NYM_CO	HHPOP	GOPOP	GQPOPINS	GQPOPSTR	GQPOPOTH	HHNUM	ELF	EMPTOT	EMPRET	EMPOFF	UNVENROL	K12ETOT	NY	HHSIZE	HHINCX	NYEARNWORK				
1 MANHATTAN	1,561,999	65,408	14,696	7,195	42,432	780,963	885,397	2,397,190	258,583	1,517,867	256,243	196,878	1	2.00	88,221	1	81,039			
2 QUEENS	2,272,447	26,813	17,129	439	7,464	807,510	1,131,405	659,872	100,711	120,884	78,329	383,419	2	2.81	54,126	2	30,977			
3 BRONX	1,344,008	41,001	24,653	2,722	11,036	484,325	507,303	321,215	81,445	28,028	54,910	308,461	3	2.77	38,964	3	31,251			
4 BROOKLYN	2,475,927	39,294	16,840	3,469	14,970	898,826	1,070,407	766,556	100,508	168,969	92,244	498,421	4	2.75	46,307	4	28,880			
5 STATEN ISLAND	476,206	23,378	8,713	233	7,739	171,330	253,697	133,300	23,310	28,100	19,206	91,968	5	2.78	66,979	5	31,138			
6 NASSAU	1,340,521	21,644	10,144	233	8,644	436,278	714,703	641,599	114,758	170,195	72,115	209,943	6	3.07	95,015	6	42,212			
7 SUFFOLK	1,577,530	29,276	12,907	709	14,662	510,320	852,096	708,106	120,337	140,255	69,395	258,917	7	3.09	79,448	7	36,855			
8 WESTCHESTER	915,210	23,655	12,553	9	10,710	329,651	499,609	493,092	71,825	121,723	75,383	152,908	8	2.78	99,573	8	51,180			
9 ROCKLAND	302,173	11,474	5,848	0	5,408	96,309	180,301	131,627	21,520	24,266	15,938	57,810	9	3.14	85,298	9	42,493			
10 PUTNAM	105,201	2,220	821	0	1,313	34,416	66,001	35,897	4,877	6,385	0	18,643	10	3.06	87,068	10	32,175			
11 ORANGE	386,071	14,226	6,737	25	7,387	140,025	122,098	165,737	30,660	27,179	10,938	77,665	11	2.76	62,858	11	29,418			
12 DUTCHESS	299,132	24,915	12,924	0	8,783	105,889	142,902	152,165	22,305	25,186	25,595	54,684	12	2.83	65,811	12	34,365			
13 FARIFIELD	969,456	18,065	5,121	865	4,365	364,024	513,620	510,279	83,263	162,261	28,686	160,904	13	2.66	103,312	13	62,937			
14 BERGEN	891,712	11,401	6,890	22	4,049	349,578	490,100	518,762	79,432	141,538	7,747	142,347	14	2.55	89,184	14	44,593			
15 PASSAIC	486,219	11,481	5,882	142	5,324	171,205	245,601	204,286	35,148	46,488	10,539	88,688	15	2.84	63,014	15	34,687			
16 HUDSON	692,841	9,408	5,364	428	3,319	243,267	334,700	317,990	39,154	101,384	11,510	113,891	16	2.85	55,079	16	48,093			
17 ESSEX	783,464	21,742	10,444	1,245	6,592	284,898	423,005	406,142	45,700	109,446	36,898	146,448	17	2.75	68,665	17	40,489			
18 UNION	540,606	7,829	4,692	78	2,956	192,772	291,899	260,756	38,055	59,267	11,424	94,240	18	2.80	74,973	18	42,119			
19 MORRIS	482,482	9,270	6,089	10	3,022	177,320	304,098	349,154	46,426	104,747	8,816	81,815	19	2.72	101,571	19	72,502			
20 SOMERSET	386,027	22,021	17,059	122	3,469	138,466	232,203	234,224	29,293	71,536	0	68,749	20	2.79	102,731	20	55,957			
21 MIDDLESEX	860,862	20,934	8,315	14	12,476	313,361	503,204	525,893	72,561	153,386	32,163	142,581	21	2.75	74,002	21	44,726			
22 MONMOUTH	721,848	10,260	5,520	11	4,682	254,270	400,500	312,189	60,822	86,184	4,953	132,893	22	2.84	84,901	22	38,302			
23 OCEAN	647,076	8,225	6,192	6	1,857	269,146	263,200	175,164	41,681	36,326	2,700	105,543	23	2.40	58,328	23	25,505			
24 HUNTERDON	160,461	4,543	4,197	0	187	57,792	99,800	74,714	12,533	18,534	0	29,487	24	2.78	101,249	24	47,133			
25 WARREN	139,203	1,555	984	1	471	51,688	72,802	42,358	8,896	5,878	1,972	25,014	25	2.69	67,619	25	31,572			
26 SUSSEX	182,204	1,739	1,590	0	69	63,250	99,001	58,848	9,609	13,329	0	36,301	26	2.88	75,953	26	31,095			
27 NEW HAVEN	852,640	27,949	11,727	181	10,198	331,871	462,976	392,726	68,881	88,586	36,505	141,882	27	2.57	62,272	27	40,337			
28 MERCER	404,820	21,395	7,455	10	13,931	153,582	219,102	308,877	38,408	82,389	31,577	70,921	28	2.64	76,154	28	36,264			
Total	22,258,346	531,121	251,286	18,169	217,515	8,212,332	11,471,730	11,298,518	1,660,701	3,660,316	995,786	3,891,421	To	2.71	72,158	Tc	49,872			

APPENDIX A: SUMMARY of BPM 2002 SED DATA UPDATE

New SED - BPM Update 2002													Year 2025												
Report	Sum												Report	Mean											
NYM_CO	HHPOP	GOPOP	GQPOPINS	GOPOPSTR	GQPOPOTH	HHNUM	ELF	EMPTOT	EMPRET	EMPOFF	UNVENROL	K12ETOT	NY	HHSIZE	HHINCX	N	YEARNWORK								
1 MANHATTAN	1,630,823	64,444	14,700	6,903	42,842	819,863	808,756	2,495,889	274,524	1,587,735	265,931	200,198	1	1.99	98,091	1	64,216								
2 QUEENS	2,721,416	34,756	22,453	570	11,736	982,360	1,232,191	701,731	120,754	134,745	92,758	449,888	2	2.77	60,519	2	38,607								
3 BRONX	1,495,924	50,128	28,624	3,582	17,916	542,136	549,816	330,782	84,326	31,197	61,027	342,355	3	2.76	43,270	3	36,564								
4 BROOKLYN	2,724,113	40,154	17,218	3,537	19,395	994,209	1,122,665	795,997	109,463	180,927	101,234	541,103	4	2.74	51,614	4	37,640								
5 STATEN ISLAND	577,654	13,326	8,578	69	4,678	209,298	271,824	190,632	42,938	40,168	22,332	107,351	5	2.76	75,176	5	39,406								
6 NASSAU	1,406,857	12,416	5,859	135	6,421	478,645	748,060	611,879	109,659	158,973	76,250	215,682	6	2.94	106,414	6	45,715								
7 SUFFOLK	1,680,307	56,775	27,835	1,448	27,493	577,085	885,444	756,819	177,078	166,023	74,893	276,590	7	2.91	88,120	7	41,871								
8 WESTCHESTER	975,263	26,832	14,245	10	12,582	365,849	494,726	468,816	71,435	120,575	81,526	160,842	8	2.67	111,235	8	50,822								
9 ROCKLAND	341,988	15,578	8,376	0	7,201	115,548	201,582	127,721	21,210	23,223	17,954	64,986	9	2.96	95,262	9	42,787								
10 PUTNAM	125,126	993	365	0	626	43,925	85,184	32,643	3,900	5,955	0	21,582	10	2.85	97,261	10	41,093								
11 ORANGE	473,274	25,890	12,262	47	13,585	169,398	244,085	175,819	37,858	31,047	13,524	95,496	11	2.79	70,237	11	34,464								
12 DUTCHESS	351,496	31,562	13,247	0	18,315	136,067	159,335	152,138	22,065	25,307	30,484	63,874	12	2.58	73,746	12	37,914								
13 FARIFIELD	1,007,884	22,154	6,285	1,058	14,813	397,879	522,115	492,000	82,046	154,830	29,427	162,812	13	2.53	115,551	13	55,835								
14 BERGEN	952,705	10,365	6,118	19	4,228	363,138	499,613	486,118	77,344	134,100	8,381	152,066	14	2.62	98,828	14	47,791								
15 PASSAIC	529,056	19,353	10,895	252	8,207	185,677	268,379	176,994	32,724	39,861	11,698	98,244	15	2.85	70,507	15	41,912								
16 HUDSON	703,866	9,599	5,468	435	3,699	274,607	329,497	278,036	35,715	85,527	11,299	116,341	16	2.56	61,544	16	44,847								
17 ESSEX	854,175	20,456	10,247	1,125	9,089	316,169	447,919	377,405	42,082	96,348	41,802	160,186	17	2.70	71,486	17	46,573								
18 UNION	586,319	7,406	4,426	76	2,903	215,602	324,316	231,561	35,519	52,257	12,380	102,578	18	2.72	83,267	18	46,710								
19 MORRIS	525,883	10,587	5,651	11	4,929	196,163	321,236	365,703	46,431	109,464	9,536	89,423	19	2.68	111,568	19	54,044								
20 SOMERSET	385,525	7,172	6,289	73	811	148,116	227,171	298,449	31,128	93,162	0	65,631	20	2.60	118,140	20	57,571								
21 MIDDLESEX	885,419	28,146	11,077	20	17,051	329,161	495,921	413,765	63,633	114,657	33,035	147,477	21	2.69	77,511	21	45,539								
22 MONMOUTH	709,689	14,119	7,728	13	6,379	267,520	427,552	347,542	70,587	94,304	4,783	131,817	22	2.65	97,050	22	43,477								
23 OCEAN	680,602	9,302	6,946	7	2,351	279,857	325,385	210,474	53,595	43,214	2,855	109,232	23	2.43	61,068	23	35,024								
24 HUNTERDON	149,802	4,761	4,430	0	329	56,855	90,319	79,159	11,659	17,786	0	27,809	24	2.63	111,091	24	46,061								
25 WARREN	139,492	2,071	1,439	1	634	55,586	74,235	46,259	11,429	6,682	1,926	25,123	25	2.51	76,594	25	38,054								
26 SUSSEX	183,175	2,362	2,144	0	219	67,348	105,032	60,550	13,920	13,062	0	36,441	26	2.72	85,058	26	36,176								
27 NEW HAVEN	897,263	35,246	14,822	225	20,214	373,170	472,223	411,223	72,156	92,869	38,087	145,704	27	2.40	69,752	27	40,742								
28 MERCER	420,268	22,881	7,973	11	14,899	162,601	241,301	251,315	30,541	68,369	32,313	73,964	28	2.58	85,103	28	47,396								
Total	24,115,364	598,834	285,700	19,627	293,545	9,123,832	11,975,941	11,367,419	1,785,718	3,722,368	1,075,435	4,184,795	To	2.64	79,638	Tc	48,610								

Prior BPM SED													Year 2025												
Report	Sum												Report	Mean											
NYM_CO	HHPOP	GOPOP	GQPOPINS	GOPOPSTR	GQPOPOTH	HHNUM	ELF	EMPTOT	EMPRET	EMPOFF	UNVENROL	K12ETOT	NY	HHSIZE	HHINCX	N	YEARNWORK								
1 MANHATTAN	1,592,418	65,412	14,781	7,064	42,626	796,164	898,402	2,437,369	261,004	1,545,774	260,050	198,255	1	2.00	88,221	1	84,054								
2 QUEENS	2,310,614	26,813	17,129	439	7,464	821,092	1,145,806	675,959	103,156	123,837	78,663	385,334	2	2.81	54,126	2	29,681								
3 BRONX	1,355,781	41,115	24,767	2,722	11,036	488,564	515,198	335,061	84,719	30,208	55,140	307,581	3	2.77	38,964	3	30,339								
4 BROOKLYN	2,490,185	39,294	16,840	3,469	14,970	904,018	1,083,703	778,225	102,022	171,530	92,634	495,551	4	2.75	46,307	4	27,983								
5 STATEN ISLAND	495,726	29,074	9,885	307	9,721	178,353	264,999	136,415	23,857	28,760	19,831	95,510	5	2.78	66,979	5	29,872								
6 NASSAU	1,368,741	21,644	10,144	233	8,644	437,218	737,597	656,486	117,418	174,143	74,469	211,010	6	3.13	95,015	6	41,837								
7 SUFFOLK	1,632,755	29,276	12,907	709	14,662	535,308	889,699	724,976	123,189	143,596	71,657	263,715	7	3.05	79,448	7	36,851								
8 WESTCHESTER	933,186	23,655	12,553	9	10,710	338,061	506,905	515,212	75,042	127,186	77,842	153,659	8	2.76	99,573	8	51,450								
9 ROCKLAND	319,219	8,549	4,619	0	3,863	101,220	187,698	138,324	22,616	25,497	16,459	59,571	9	3.15	85,298	9	42,758								
10 PUTNAM	110,703	2,220	821	0	1,313	36,374	69,001	39,500	5,367	7,025	0	19,323	10	3.04	87,067	10	32,363								
11 ORANGE	416,252	14,226	6,737	25	7,387	150,812	228,001	177,916	32,913	29,171	11,663	82,357	11	2.76	62,858	11	28,895								
12 DUTCHESS	320,001	22,938	12,625	0	7,842	112,719	151,399	163,868	24,022	27,119	27,291	57,061	12	2.84	65,811	12	33,298								
13 FARIFIELD	1,018,759	18,065	5,121	865	4,365	378,629	534,816	537,820	87,750	171,021	29,623	163,950	13	2.69	103,311	13	65,054								
14 BERGEN	907,746	11,401	6,890	22	4,049	355,615	490,497	522,409	79,991	142,537	7,999	145,319	14	2.55	89,184	14	43,764								
15 PASSAIC	498,624	11,574	5,931	143	5,368	175,573	253,099	213,872	36,797	48,670	10,883	91,202	15	2.84	62,987	15	33,606								
16 HUDSON	720,383	9,408	5,364	428	3,319	251,971	346,103	284,960	31,825	93,489	11,558	118,723	16	2.86	55,078	16	47,055								
17 ESSEX	797,537	21,763	10,454	1,247	6,597	291,080	426,298	410,197	45,307	112,211	38,104	149,470	17	2.74	68,664	17	38,859								
18 UNION	557,940	7,829	4,692	78	2,956	198,755	299,002	269,391	39,318	61,228	11,797	97,511	18	2.81	74,974	18	41,406								
19 MORRIS	502,888	9,270	6,089	10	3,022	184,127	313,204	355,038	47,207	106,514	9,104	85,473	19	2.73	101,570	19	75,023								
20 SOMERSET	419,144	23,395	18,144	130	3,678	149,224	248,600	239,991	30,015	73,298	0	74,788	20	2.81	102,730	20	56,096								
21 MIDDLESEX	897,621	20,877	8,294	14	12,445	335,050	543,726	543,726	75,021	158,591	33,213	148,968	21	2.68	74,002	21	44,818								
22 MONMOUTH	763,759	10,260	5,520	11	4,682	267,200	419,502	333,350	64,947	92,030	5,115	140,931	22	2.86	84,902	22	38,810								
23 OCEAN	687,409	8,289	6,238	6	1,874	292,179	277,002	180,194	42,880	37,366	2,879	112,388	23	2.35	58,328	23	24,240								
24 HUNTERDON	175,113	4,543	4,197	0	187	62,365	107,400	80,088	13,434	19,866	0	32,205	24	2.81	101,248	24	47,546								
25 WARREN	152,947	1,555	984	1	471	56,269	79,299	45,947	9,649	6,375	2,102	27,539	25	2.72	67,619	25	31,244								
26 SUSSEX	194,278	1,739	1,590	0	69	66,907	104,700	64,089	10,461	14,518	0	38,802	26	2.90	75,954	26	30,593								
27 NEW HAVEN	894,992	27,949	11,727	181	10,198	344,602	480,869	411,725	72,219	92,865	37,696	144,314	27	2.60	62,272	27	40,373								
28 MERCER	425,791	21,395	7,455	10	13,931	160,333	220,400	322,235	40,079	85,264	32,607	74,637	28	2.65	76,153	28	36,082								
Total	22,960,512	533,528	252,298	18,123	217,449	8,469,782	11,805,999	11,594,343	1,702,225	3,749,689	1,018,379	3,975,147	To	2.71	72,261	Tc	50,214								

APPENDIX A: SUMMARY of BPM 2002 SED DATA UPDATE

Difference: New minus Current														Year 2025								
Report														Report				Report				
Sum														Mean				Mean				
NYM_CO	HHPOP	GQPOP	GQPOPINS	GQPOPSTR	GQPOPOTH	HHNUM	ELF	EMPTOT	EMPRET	EMPOFF	UNVENROL	K12ETOT	NY	HHSIZE	HHINCX	NYEARNWORK						
1 MANHATTAN	38,405	-968	-81	-161	216	23,699	-89,646	58,520	13,520	41,961	5,881	1,943	1	-0.01	9,870	1	-19,837					
2 QUEENS	410,802	7,943	5,324	131	4,272	161,268	86,385	25,772	17,598	10,908	14,095	64,554	2	-0.04	6,392	2	8,925					
3 BRONX	140,143	9,013	3,857	860	6,880	53,572	34,618	-4,279	-393	989	5,887	34,774	3	-0.02	4,306	3	6,224					
4 BROOKLYN	233,928	860	378	68	4,425	90,191	38,962	17,772	7,441	9,397	8,600	45,552	4	-0.01	5,307	4	9,658					
5 STATEN ISLAND	81,928	-15,748	-1,307	-238	-5,043	30,945	6,825	54,217	19,081	11,408	2,501	11,841	5	-0.02	8,197	5	9,534					
6 NASSAU	38,116	-9,228	-4,285	-98	-2,223	41,427	10,463	-44,607	-7,759	-15,170	1,781	4,672	6	-0.19	11,399	6	3,878					
7 SUFFOLK	47,552	27,499	14,928	739	12,831	41,777	-4,255	31,843	53,889	22,427	3,236	12,875	7	-0.14	8,672	7	5,021					
8 WESTCHESTER	42,077	3,177	1,692	1	1,872	27,788	-12,179	-46,396	-3,607	-6,611	3,684	7,183	8	-0.09	11,663	8	-628					
9 ROCKLAND	22,769	7,029	3,757	0	3,338	14,328	13,884	-10,603	-1,406	-2,274	1,495	5,415	9	-0.20	9,963	9	29					
10 PUTNAM	14,423	-1,227	-456	0	-687	7,551	16,183	-6,857	-1,467	-1,070	0	2,259	10	-0.20	10,194	10	8,731					
11 ORANGE	57,022	11,664	5,525	22	6,198	18,586	16,084	-2,097	4,945	1,876	1,861	13,139	11	0.03	7,378	11	5,569					
12 DUTCHESS	31,495	8,624	622	0	10,473	23,348	7,936	-11,730	-1,957	-1,812	3,193	6,813	12	-0.26	7,935	12	4,616					
13 FARIFIELD	-10,875	4,089	1,164	193	10,448	19,250	-12,701	-45,820	-5,704	-16,191	-196	-1,138	13	-0.16	12,240	13	-9,219					
14 BERGEN	44,959	-1,036	-572	-3	179	7,523	9,116	-36,291	-2,647	-8,437	382	6,747	14	0.07	9,644	14	4,028					
15 PASSAIC	30,432	7,779	4,964	109	2,839	10,104	15,280	-36,874	-4,073	-8,809	815	7,042	15	0.01	7,520	15	8,307					
16 HUDSON	-16,517	191	104	7	380	22,636	-16,606	-6,924	3,890	-7,962	-259	-2,382	16	-0.30	6,466	16	-2,207					
17 ESSEX	56,638	-1,307	-207	-122	2,492	25,089	21,621	-32,792	-3,225	-15,863	3,698	10,716	17	-0.04	2,822	17	7,714					
18 UNION	28,379	-423	-266	-2	-53	16,847	25,314	-37,830	-3,799	-8,971	583	5,067	18	-0.09	8,293	18	5,305					
19 MORRIS	22,995	1,317	-438	1	1,907	12,036	8,032	10,665	-776	2,950	432	3,950	19	-0.05	9,997	19	-20,980					
20 SOMERSET	-33,619	-16,223	-11,855	-57	-2,867	-1,108	-21,429	58,458	1,113	19,864	0	-9,157	20	-0.20	15,410	20	1,478					
21 MIDDLESEX	-12,202	7,269	2,783	6	4,606	-5,889	-23,879	-129,961	-11,388	-43,934	-178	-1,491	21	0.01	3,510	21	720					
22 MONMOUTH	-54,070	3,859	2,208	2	1,697	320	8,050	14,192	5,640	2,274	-332	-9,114	22	-0.21	12,149	22	4,666					
23 OCEAN	-6,807	1,013	708	1	477	-12,322	48,383	30,280	10,715	5,848	-24	-3,156	23	0.08	2,740	23	10,784					
24 HUNTERDON	-25,311	218	233	0	142	-5,510	-1,081	-929	-1,775	-2,080	0	-4,396	24	-0.17	9,842	24	-1,485					
25 WARREN	-13,455	516	455	0	163	-683	-5,064	312	1,780	307	-176	-2,416	25	-0.21	8,975	25	6,810					
26 SUSSEX	-11,103	623	554	0	150	441	332	-3,539	3,459	-1,456	0	-2,361	26	-0.18	9,104	26	5,583					
27 NEW HAVEN	2,271	7,297	3,095	44	10,016	28,568	-8,587	-502	-63	4	391	1,390	27	-0.19	7,479	27	369					
28 MERCER	-5,523	1,486	518	1	968	2,268	13,901	-70,920	-9,538	-16,895	-294	-673	28	-0.07	8,950	28	11,313					
Total	1,154,852	65,306	33,402	1,504	76,096	654,050	169,942	-226,924	83,493	-27,321	57,056	209,648	To	-0.07	7,377	Td	-1,603					

Percent Difference: New minus Current																	
Report																	Report
Sum																	Mean
NYM_CO	HHPOP	GQPOP	GQPOPINS	GQPOPSTR	GQPOPOTH	HHNUM	ELF	EMPTOT	EMPRET	EMPOFF	UNVENROL	K12ETOT	NY	HHSIZE	HHINCX	NYEARNWORK	
1 MANHATTAN	2.4%	-1.5%	-0.5%	-2.3%	0.5%	3.0%	-10.0%	2.4%	5.2%	2.7%	2.3%	1.0%	1	-0.5%	11.2%	1	-23.6%
2 QUEENS	17.8%	29.6%	31.1%	29.8%	57.2%	19.6%	7.5%	3.8%	17.1%	8.8%	17.9%	16.8%	2	-1.6%	11.8%	2	30.1%
3 BRONX	10.3%	21.9%	15.6%	31.6%	62.3%	11.0%	-1.3%	-1.3%	-0.5%	3.3%	10.7%	11.3%	3	-0.6%	11.1%	3	20.5%
4 BROOKLYN	9.4%	2.2%	2.2%	2.0%	29.6%	10.0%	3.6%	2.3%	7.3%	5.5%	9.3%	9.2%	4	-0.5%	11.5%	4	34.5%
5 STATEN ISLAND	16.5%	-54.2%	-13.2%	-77.5%	-51.9%	17.4%	2.6%	39.7%	80.0%	39.7%	12.6%	12.4%	5	-0.7%	12.2%	5	31.9%
6 NASSAU	2.8%	-42.6%	-42.2%	-42.1%	-25.7%	9.5%	1.4%	-6.8%	-6.6%	-8.7%	2.4%	2.2%	6	-6.1%	12.0%	6	9.3%
7 SUFFOLK	2.9%	93.9%	115.7%	104.2%	87.5%	7.8%	-0.5%	4.4%	43.7%	15.6%	4.5%	4.9%	7	-4.5%	10.9%	7	13.6%
8 WESTCHESTER	4.5%	13.4%	13.5%	11.1%	17.5%	8.2%	-2.4%	-9.0%	-4.8%	-5.2%	4.7%	4.7%	8	-3.4%	11.7%	8	-1.2%
9 ROCKLAND	7.1%	82.2%	81.3%		86.4%	14.2%	7.4%	-7.7%	-6.2%	-8.9%	9.1%	9.1%	9	-6.2%	11.7%	9	0.1%
10 PUTNAM	13.0%	-55.3%	-55.5%		-52.3%	20.8%	23.5%	-17.4%	-27.3%	-15.2%		11.7%	10	-6.4%	11.7%	10	27.0%
11 ORANGE	13.7%	82.0%	82.0%	88.0%	83.9%	12.3%	7.1%	-1.2%	15.0%	6.4%	16.0%	16.0%	11	1.2%	11.7%	11	19.3%
12 DUTCHESS	9.8%	37.6%	4.9%		133.6%	20.7%	5.2%	-7.2%	-8.1%	-6.7%	11.7%	11.9%	12	-9.0%	12.1%	12	13.9%
13 FARIFIELD	-1.1%	22.6%	22.7%	22.3%	239.4%	5.1%	-2.4%	-8.5%	-6.5%	-9.5%	-0.7%	-0.7%	13	-5.9%	11.8%	13	-14.2%
14 BERGEN	5.0%	-9.1%	-8.6%	-13.6%	4.4%	2.1%	1.9%	-6.9%	-3.3%	-5.9%	4.8%	4.6%	14	2.8%	10.8%	14	9.2%
15 PASSAIC	6.1%	67.2%	83.7%	76.2%	52.9%	5.8%	6.0%	-17.2%	-11.1%	-18.1%	7.5%	7.7%	15	0.3%	11.9%	15	24.7%
16 HUDSON	-2.3%	2.0%	1.9%	1.6%	11.4%	9.0%	-4.8%	-2.4%	12.2%	-8.5%	-2.2%	-2.0%	16	-10.4%	11.7%	16	-4.7%
17 ESSEX	7.1%	-6.0%	-2.0%	-9.8%	37.8%	8.6%	5.1%	-8.0%	-7.1%	-14.1%	9.7%	7.2%	17	-1.4%	4.1%	17	19.9%
18 UNION	5.1%	-5.4%	-5.7%	-2.6%	-1.8%	8.5%	8.5%	-14.0%	-9.7%	-14.7%	4.9%	5.2%	18	-3.2%	11.1%	18	12.8%
19 MORRIS	4.6%	14.2%	-7.2%	10.0%	63.1%	6.5%	2.6%	3.0%	-1.6%	2.8%	4.7%	4.6%	19	-1.8%	9.8%	19	-28.0%
20 SOMERSET	-8.0%	-69.3%	-65.3%	-43.8%	-77.9%	-0.7%	-8.6%	24.4%	3.7%	27.1%		-12.2%	20	-7.3%	15.0%	20	2.6%
21 MIDDLESEX	-1.4%	34.8%	33.6%	42.9%	37.0%	-1.8%	-4.6%	-23.9%	-15.2%	-27.7%	-0.5%	-1.0%	21	0.4%	4.7%	21	1.6%
22 MONMOUTH	-7.1%	37.6%	40.0%	18.2%	36.2%	0.1%	1.9%	4.3%	8.7%	2.5%	-6.5%	-6.5%	22	-7.2%	14.3%	22	12.0%
23 OCEAN	-1.0%	12.2%	11.3%	16.7%	25.5%	-4.2%	17.5%	16.8%	25.0%	15.7%	-0.8%	-2.8%	23	3.4%	4.7%	23	44.5%
24 HUNTERDON	-14.5%	4.8%	5.6%		75.9%	-8.8%	-15.9%	-1.2%	-13.2%	-10.5%		-13.7%	24	-6.2%	9.7%	24	-3.1%
25 WARREN	-8.8%	33.2%	46.2%	0.0%	34.6%	-1.2%	-6.4%	0.7%	18.4%	4.8%	-8.4%	-8.8%	25	-7.6%	13.3%	25	21.8%
26 SUSSEX	-5.7%	35.8%	34.8%		217.4%	0.7%	0.3%	-5.5%	33.1%	-10.0%		-6.1%	26	-6.3%	12.0%	26	18.3%
27 NEW HAVEN	0.3%	26.1%	26.4%	24.3%	98.2%	8.3%	-1.8%	-0.1%	-0.1%	0.0%	1.0%	1.0%	27	-7.4%	12.0%	27	0.9%
28 MERCER	-1.3%	6.9%	6.9%	10.0%	6.9%	1.4%	6.1%	-22.0%	-23.8%	-19.8%	-0.9%	-0.9%	28	-2.6%	11.8%	28	31.4%
Total	5.0%	12.2%	13.2%	8.3%	35.0%	7.7%	1.4%	-2.0%	4.9%	-0.7%	5.6%	5.3%	To	-2.5%	10.2%	Td	-3.2%

APPENDIX A: SUMMARY of BPM 2002 SED DATA UPDATE

New SED - BPM Update 2002														Year 2030														
Report														Report														Report
Sum														Mean														Mean
NYM_CO	HHPOP	GOPOP	GQPOPINS	GQPOPSTR	GQPOPOTH	HHNUM	ELF	EMPTOT	EMPRET	EMPOFF	UNVENROL	K12ETOT		NY	HHSIZE	HHINCX	NYEARNWORK											
1 MANHATTAN	1,645,704	64,635	14,744	6,925	42,971	826,685	812,366	2,592,474	285,805	1,650,323	271,825	200,839	1	1.99	97,918	1	64,240											
2 QUEENS	2,760,237	35,039	22,637	578	11,825	995,267	1,282,328	724,839	124,419	139,383	95,321	447,062	2	2.77	60,516	2	38,594											
3 BRONX	1,507,043	49,546	28,294	3,537	17,712	545,872	580,894	342,971	87,671	32,628	61,942	338,574	3	2.76	43,251	3	36,559											
4 BROOKLYN	2,757,218	40,258	17,258	3,545	19,446	1,005,342	1,165,866	835,610	115,336	190,221	104,153	539,437	4	2.74	51,602	4	37,596											
5 STATEN ISLAND	618,495	14,491	9,328	75	5,091	222,932	284,230	206,003	44,800	43,453	24,100	113,818	5	2.77	75,189	5	39,406											
6 NASSAU	1,422,541	9,280	4,376	101	4,798	478,168	754,851	620,414	111,197	161,248	77,083	199,429	6	2.97	106,441	6	45,715											
7 SUFFOLK	1,718,317	65,316	32,593	1,687	31,036	575,590	917,550	792,959	179,628	174,251	77,072	271,090	7	2.99	88,059	7	41,871											
8 WESTCHESTER	985,531	26,261	13,934	10	12,312	367,818	513,316	489,340	74,489	126,154	84,601	156,470	8	2.68	111,235	8	50,827											
9 ROCKLAND	352,907	17,555	9,439	0	8,116	117,772	212,541	133,446	22,161	24,286	18,998	65,567	9	3.00	95,248	9	42,787											
10 PUTNAM	133,607	713	262	0	450	45,710	85,537	34,412	4,109	6,278	0	22,307	10	2.92	97,255	10	41,093											
11 ORANGE	503,257	29,104	13,783	53	15,266	176,034	265,122	186,258	40,088	32,884	14,917	100,065	11	2.86	70,235	11	34,464											
12 DUTCHESS	393,612	37,843	15,635	0	22,206	146,037	160,556	162,331	23,550	26,999	35,247	70,408	12	2.70	73,786	12	37,914											
13 FARIFIELD	1,043,743	23,477	6,659	1,120	15,699	414,741	524,274	502,588	83,816	157,469	30,900	162,428	13	2.52	115,557	13	55,835											
14 BERGEN	979,154	10,462	6,174	19	4,270	373,620	542,469	502,087	79,730	138,862	8,779	150,827	14	2.62	98,793	14	47,803											
15 PASSAIC	539,449	19,239	10,830	250	8,158	189,281	277,970	180,359	33,331	40,625	12,285	97,174	15	2.85	70,555	15	41,908											
16 HUDSON	733,732	9,910	5,696	447	3,772	286,624	331,429	289,773	37,297	91,523	11,710	118,341	16	2.56	61,552	16	44,831											
17 ESSEX	872,649	20,615	10,320	1,135	9,160	323,100	494,013	388,989	43,693	102,962	43,788	158,976	17	2.70	71,507	17	46,530											
18 UNION	600,186	7,510	4,491	77	2,939	220,658	340,368	237,263	36,352	53,527	12,982	102,239	18	2.72	83,378	18	46,712											
19 MORRIS	546,095	11,070	5,934	12	5,125	203,769	361,303	384,765	49,016	114,698	10,156	90,076	19	2.68	111,860	19	53,966											
20 SOMERSET	418,201	7,726	6,797	74	854	160,845	230,274	328,820	33,845	102,715	0	70,033	20	2.60	119,261	20	57,800											
21 MIDDLESEX	927,699	29,228	11,389	22	17,819	344,767	519,790	432,330	66,134	119,995	34,369	150,660	21	2.69	77,794	21	45,511											
22 MONMOUTH	717,948	14,264	7,804	13	6,452	270,924	429,721	371,430	75,061	100,511	4,820	130,455	22	2.65	97,112	22	43,322											
23 OCEAN	727,530	9,767	7,283	7	2,476	299,296	333,331	224,784	56,748	46,304	3,025	113,608	23	2.43	61,091	23	35,072											
24 HUNTERDON	160,067	5,063	4,712	0	350	60,864	95,980	84,679	12,243	19,215	0	29,434	24	2.63	111,047	24	46,123											
25 WARREN	150,599	2,243	1,565	1	681	59,998	78,334	48,319	11,876	7,013	2,085	26,876	25	2.51	76,975	25	38,026											
26 SUSSEX	195,929	2,527	2,294	0	233	72,033	106,811	64,799	14,866	13,806	0	38,451	26	2.72	85,007	26	36,121											
27 NEW HAVEN	931,415	38,280	16,092	245	21,960	390,322	490,048	421,757	74,008	95,252	49,549	145,749	27	2.39	69,760	27	40,742											
28 MERCER	457,858	24,862	8,662	11	16,183	177,466	252,441	261,144	31,735	70,787	44,142	78,899	28	2.58	85,103	28	47,395											
Total	24,800,723	626,284	298,985	19,944	307,360	9,351,535	12,443,713	11,844,943	1,853,004	3,883,372	1,133,849	4,189,292	To	2.65	79,697	Tc	48,593											
Prior BPM SED																												
Report														Report														Report
Sum														Mean														Mean
NYM_CO	HHPOP	GOPOP	GQPOPINS	GQPOPSTR	GQPOPOTH	HHNUM	ELF	EMPTOT	EMPRET	EMPOFF	UNVENROL	K12ETOT		NY	HHSIZE	HHINCX	NYEARNWORK											
1 MANHATTAN	1,609,560	69,257	15,458	7,783	44,735	804,485	925,063	2,521,173	259,640	1,605,345	266,808	199,432	1	2.00	88,221	1	83,277											
2 QUEENS	2,346,875	26,777	17,104	439	7,451	828,806	1,187,962	686,322	98,864	125,867	80,942	383,928	2	2.83	54,126	2	28,434											
3 BRONX	1,386,523	39,326	24,176	2,521	10,226	498,954	524,123	340,654	85,191	30,970	56,739	308,532	3	2.78	38,964	3	29,682											
4 BROOKLYN	2,519,999	40,122	17,198	3,545	15,295	914,091	1,116,291	788,364	103,245	174,336	95,316	494,384	4	2.76	46,307	4	27,163											
5 STATEN ISLAND	505,904	30,080	9,856	324	10,096	182,462	281,540	140,521	23,381	29,654	20,406	96,527	5	2.77	66,979	5	29,251											
6 NASSAU	1,405,859	21,789	10,219	235	8,704	453,700	741,731	674,829	117,456	179,062	76,624	198,597	6	3.10	95,015	6	41,111											
7 SUFFOLK	1,676,874	29,487	13,000	713	14,767	549,392	914,870	744,500	118,007	147,508	73,730	258,189	7	3.05	79,448	7	35,681											
8 WESTCHESTER	935,009	22,882	12,146	9	10,356	331,753	516,088	526,165	75,171	130,448	80,092	148,209	8	2.82	99,573	8	50,747											
9 ROCKLAND	318,879	11,365	5,850	0	5,316	100,500	195,914	143,635	22,630	26,496	16,935	58,452	9	3.17	85,298	9	42,388											
10 PUTNAM	112,497	2,400	886	0	1,421	36,446	72,073	41,888	5,367	7,450	0	19,082	10	3.09	87,068	10	30,641											
11 ORANGE	419,666	14,402	6,821	26	7,479	154,258	238,228	184,699	32,896	30,285	12,163	81,587	11	2.72	62,859	11	28,029											
12 DUTCHESS	322,175	26,208	13,717	0	9,199	112,142	151,674	171,012	24,022	28,308	28,461	56,732	12	2.87	65,810	12	32,582											
13 FARIFIELD	1,034,288	18,410	5,219	881	4,449	385,151	542,217	548,493	87,914	173,690	30,480	160,281	13	2.69	103,312	13	64,811											
14 BERGEN	916,224	11,719	6,874	22	4,157	360,843	512,085	537,134	80,196	146,868	8,231	141,717	14	2.54	89,185	14	43,036											
15 PASSAIC	500,065	9,177	4,703	114	4,257	176,396	255,801	214,928	36,797	48,912	11,198	88,367	15	2.84	62,990	15	33,026											
16 HUDSON	745,553	9,725	5,550	441	3,433	256,294	356,801	318,950	34,415	105,347	11,893	119,901	16	2.91	55,078	16	47,039											
17 ESSEX	796,950	22,205	10,698	1,273	6,727	288,646	443,485	415,575	48,651	113,369	39,205	145,270	17	2.76	68,665	17	39,097											
18 UNION	8,013	8,013	4,799	80	3,025	197,378	304,944	275,320	39,327	62,592	12,138	95,401	18	2.84	74,974	18	40,391											
19 MORRIS	504,358	9,532	6,259	10	3,104	185,231	326,469	368,522	47,225	110,587	9,367	83,059	19	2.72	101,570	19	74,140											
20 SOMERSET	435,679	31,093	23,923	161	4,967	154,487	259,773	253,476	30,017	77,426	0	77,768	20	2.82	102,731	20	56,474											
21 MIDDLESEX	930,899	20,602	8,182	14	12,276	341,451	549,718	573,490	75,132	167,447	34,174	150,684	21	2.73	74,002	21	44,199											
22 MONMOUTH	789,285	10,219	5,496	11	4,663	272,983	442,002	344,288	64,850	95,052	5,263	142,331	22	2.89	84,901	22	38,128											
23 OCEAN	723,117	8,688	6,537	6	1,962	307,134	486,256	188,232	42,045	39,038	3,002	115,737	23	2.35	58,328	23	23,262											
24 HUNTERDON	182,833	4,790	4,425	0	198	65,162	114,328	84,385	13,434	20,933	0	33,283	24	2.81	101,249	24	46,871											
25 WARREN	159,068	1,617	1,024	1	490	58,442	83,157	46,432	9,649	6,443	2,192	28,429	25	2.72	67,619	25	30,564											
26 SUSSEX	202,794	1,759	1,609	0	69	69,808	109,060	67,167	10,461	15,212	0	39,950	26	2.91	75,954	26	30,039											
27 NEW HAVEN	892,421	28,332	11,884	183	10,334	344,197	488,063	413,497	72,219	93,265	47,047	138,494	27	2.59	62,272	27	39,921											
28 MERCER	445,675	21,395	7,455	10	13,931	167,437	238,768	339,991	35,077	89,644	42,710	76,342	28	2.66	76,154	28	35,484											
Total	23,379,241	551,371	261,068	18,802	223,067	8,598,029	12,178,484	11,953,642	1,693,279	3,881,554	1,065,116	3,940,665	To	2.72	72,265	Tc	49,594											

APPENDIX A: SUMMARY of BPM 2002 SED DATA UPDATE

Difference: New minus Current													Year 2030									
Report													Report			Report						
Sum													Mean			Mean						
NYM_CO	HHPOP	GQPOP	GQPOPINS	GQPOPSTR	GQPOPOTH	HHNUM	ELF	EMPTOT	EMPRET	EMPOFF	UNVENROL	K12ETOT	NY	HHSIZE	HHINCX	NYEARNWORK						
1 MANHATTAN	36,144	-4,622	-714	-858	-1,764	22,200	-112,697	71,301	26,165	44,978	5,017	1,407	1	-0.01	9,697	1	-19,037					
2 QUEENS	413,362	8,262	5,533	139	4,374	166,461	94,366	38,517	25,555	13,516	14,379	63,134	2	-0.06	6,389	2	10,160					
3 BRONX	120,520	10,220	4,118	1,016	7,486	46,918	56,771	2,317	2,480	1,658	5,203	30,042	3	-0.02	4,287	3	6,877					
4 BROOKLYN	237,219	136	60	0	4,151	91,251	49,575	47,246	12,091	15,885	8,837	45,053	4	-0.01	5,295	4	10,433					
5 STATEN ISLAND	112,591	-15,589	-528	-249	-5,005	40,470	2,890	65,482	21,419	13,799	3,694	17,291	5	0.00	8,211	5	10,155					
6 NASSAU	16,682	-12,509	-5,843	-134	-3,906	24,468	13,120	-54,415	-6,259	-17,814	459	832	6	-0.12	11,426	6	4,603					
7 SUFFOLK	41,443	35,829	19,593	974	16,269	26,198	2,680	48,459	61,621	26,743	3,342	12,901	7	-0.07	8,611	7	6,190					
8 WESTCHESTER	50,522	3,379	1,788	1	1,956	36,065	-2,772	-36,825	-682	-4,294	4,509	8,261	8	-0.14	11,662	8	80					
9 ROCKLAND	34,028	6,190	3,589	0	2,800	17,272	16,627	-10,189	-469	-2,210	2,063	7,115	9	-0.18	9,950	9	398					
10 PUTNAM	21,110	-1,687	-624	0	-971	9,264	13,464	-7,476	-1,258	-1,172	0	3,225	10	-0.16	10,187	10	10,453					
11 ORANGE	83,591	14,702	6,962	27	7,787	26,894	1,559	1,559	7,192	2,599	2,754	18,478	11	0.14	7,377	11	6,434					
12 DUTCHESS	71,437	11,635	1,918	0	13,007	33,895	8,882	-8,681	-472	-1,309	6,786	13,676	12	-0.18	7,976	12	5,332					
13 FARIFIELD	9,455	5,067	1,440	239	11,250	29,590	-17,943	-45,905	-4,098	-16,221	420	2,147	13	-0.17	12,245	13	-8,976					
14 BERGEN	62,930	-1,257	-700	-3	113	12,777	30,384	-35,047	-466	-8,006	548	9,110	14	0.08	9,608	14	4,767					
15 PASSAIC	39,384	10,062	6,127	136	3,901	12,885	22,169	-34,569	-3,466	-8,287	1,087	8,807	15	0.01	7,566	15	8,882					
16 HUDSON	-11,821	185	146	6	339	30,330	-25,372	-29,177	2,882	-13,824	-183	-1,560	16	-0.35	6,474	16	-2,208					
17 ESSEX	75,699	-1,590	-378	-138	2,433	34,454	50,528	-26,586	-4,958	-10,407	4,583	13,706	17	-0.06	2,842	17	7,434					
18 UNION	39,974	-503	-308	-3	-86	23,280	35,424	-38,057	-2,975	-9,065	844	6,838	18	-0.12	8,405	18	6,321					
19 MORRIS	41,737	1,538	-325	2	2,021	18,538	34,834	16,243	1,791	4,111	789	7,017	19	-0.04	10,290	19	-20,174					
20 SOMERSET	-17,478	-23,367	-17,126	-87	-4,113	6,358	-29,499	75,344	3,828	25,289	0	-7,735	20	-0.22	16,530	20	1,326					
21 MIDDLESEX	8,626	3,207	3,207	8	5,543	3,316	-29,928	-141,160	-8,998	-47,452	195	-24	21	-0.04	3,792	21	1,312					
22 MONMOUTH	-71,337	4,045	2,308	2	1,789	-2,059	-12,281	27,142	10,211	5,459	-443	-11,876	22	-0.24	12,211	22	5,194					
23 OCEAN	4,413	1,079	746	1	514	-7,838	47,075	36,552	14,703	7,266	23	-2,129	23	0.08	2,763	23	11,810					
24 HUNTERDON	-22,766	273	287	0	152	-4,298	-18,348	294	-1,191	-1,718	0	-3,849	24	-0.18	9,798	24	-748					
25 WARREN	-8,469	626	541	0	191	1,556	-4,823	1,887	2,227	570	-107	-1,553	25	-0.21	9,356	25	7,461					
26 SUSSEX	-6,865	768	685	0	164	2,225	-2,249	-2,368	4,405	-1,406	0	-1,499	26	-0.19	9,054	26	6,082					
27 NEW HAVEN	38,994	9,948	4,208	62	11,626	46,125	1,985	8,260	1,789	1,987	2,502	7,255	27	-0.21	7,488	27	821					
28 MERCER	12,183	3,467	1,207	1	2,252	10,029	13,673	-78,847	-3,342	-18,857	1,432	2,557	28	-0.08	8,949	28	11,911					
Total	1,421,482	74,913	37,917	1,142	84,273	753,506	265,229	-108,699	159,725	1,818	68,733	248,627	To	-0.07	7,432	Td	-1,001					

Percent Difference: New minus Current																			
Report													Report			Report			
Sum													Mean			Mean			
NYM_CO	HHPOP	GQPOP	GQPOPINS	GQPOPSTR	GQPOPOTH	HHNUM	ELF	EMPTOT	EMPRET	EMPOFF	UNVENROL	K12ETOT	NY	HHSIZE	HHINCX	NYEARNWORK			
1 MANHATTAN	2.2%	-4.6%	-4.6%	-11.0%	-3.9%	2.8%	-12.2%	2.8%	10.1%	2.8%	1.9%	0.7%	1	-0.5%	11.0%	1	-22.9%		
2 QUEENS	17.6%	30.9%	32.3%	31.7%	58.7%	20.1%	7.9%	5.6%	25.8%	10.7%	17.8%	16.4%	2	-2.0%	11.8%	2	35.7%		
3 BRONX	8.7%	26.0%	17.0%	40.3%	73.2%	9.4%	10.8%	0.7%	2.9%	5.4%	9.2%	9.7%	3	-0.6%	11.0%	3	23.2%		
4 BROOKLYN	9.4%	0.3%	0.3%	0.0%	27.1%	10.0%	4.4%	6.0%	11.7%	9.1%	9.3%	9.1%	4	-0.5%	11.4%	4	38.4%		
5 STATEN ISLAND	22.3%	-51.8%	-5.4%	-76.9%	-49.6%	22.2%	1.0%	46.6%	91.6%	46.5%	18.1%	17.9%	5	0.0%	12.3%	5	34.7%		
6 NASSAU	1.2%	-57.4%	-57.2%	-57.0%	-44.9%	5.4%	1.8%	-8.1%	-5.3%	-9.9%	0.6%	0.4%	6	-4.0%	12.0%	6	11.2%		
7 SUFFOLK	2.5%	121.5%	150.7%	136.6%	110.2%	4.8%	0.3%	6.5%	52.2%	18.1%	4.5%	5.0%	7	-2.2%	10.8%	7	17.3%		
8 WESTCHESTER	5.4%	14.8%	14.7%	11.1%	18.9%	10.9%	-0.5%	-7.0%	-0.9%	-3.3%	5.6%	5.6%	8	-4.9%	11.7%	8	0.2%		
9 ROCKLAND	10.7%	54.5%	61.4%		52.7%	17.2%	8.5%	-7.1%	-2.1%	-8.3%	12.2%	12.2%	9	-5.6%	11.7%	9	0.9%		
10 PUTNAM	18.8%	-70.3%	-70.4%		-68.3%	25.4%	18.7%	-17.8%	-23.4%	-15.7%	16.9%	10	10	-5.3%	11.7%	10	34.1%		
11 ORANGE	19.9%	102.1%	102.1%	103.8%	104.1%	14.1%	11.3%	0.8%	21.9%	8.6%	22.6%	22.6%	11	5.1%	11.7%	11	23.0%		
12 DUTCHESS	22.2%	44.4%	14.0%		141.4%	30.2%	5.9%	-5.1%	-2.0%	-4.6%	23.8%	24.1%	12	-6.2%	12.1%	12	16.4%		
13 FARIFIELD	0.9%	27.5%	27.6%	27.1%	252.9%	7.7%	-3.3%	-8.4%	-4.7%	-9.3%	1.4%	1.3%	13	-6.3%	11.9%	13	-13.8%		
14 BERGEN	6.9%	-10.7%	-10.2%	-13.6%	2.7%	3.5%	5.9%	-6.5%	-0.6%	-5.5%	6.7%	6.4%	14	3.2%	10.8%	14	11.1%		
15 PASSAIC	7.9%	109.6%	130.3%	119.3%	91.6%	7.3%	8.7%	-16.1%	-9.4%	-16.9%	9.7%	10.0%	15	0.5%	12.0%	15	26.9%		
16 HUDSON	-1.6%	1.9%	2.6%	1.4%	9.9%	11.8%	-7.1%	-9.1%	8.4%	-13.1%	-1.5%	-1.3%	16	-12.0%	11.8%	16	-4.7%		
17 ESSEX	9.5%	-7.2%	-3.5%	-10.8%	36.2%	11.9%	11.4%	-6.4%	-10.2%	-9.2%	11.7%	9.4%	17	-2.2%	4.1%	17	19.0%		
18 UNION	7.1%	-6.3%	-6.4%	-3.8%	11.8%	11.6%	-13.8%	-7.6%	-14.5%	7.0%	7.2%	7.2%	18	-4.1%	11.2%	18	15.6%		
19 MORRIS	8.3%	16.1%	-5.2%	20.0%	65.1%	10.0%	10.7%	4.4%	3.8%	3.7%	8.4%	8.4%	19	-1.6%	10.1%	19	-27.2%		
20 SOMERSET	-4.0%	-75.2%	-71.6%	-54.0%	-82.8%	4.1%	-11.4%	29.7%	12.8%	32.7%	-9.9%	-9.9%	20	-7.8%	16.1%	20	2.3%		
21 MIDDLESEX	-0.3%	41.9%	39.2%	57.1%	45.2%	1.0%	-5.4%	-24.6%	-12.0%	-28.3%	0.6%	0.0%	21	-1.3%	5.1%	21	3.0%		
22 MONMOUTH	-9.0%	39.6%	42.0%	18.2%	38.4%	-0.8%	-2.8%	7.9%	15.7%	5.7%	-8.4%	-8.3%	22	-8.3%	14.4%	22	13.6%		
23 OCEAN	0.6%	12.4%	11.4%	16.7%	16.2%	-2.6%	-2.4%	19.4%	35.0%	18.6%	0.8%	-1.8%	23	3.3%	4.7%	23	50.8%		
24 HUNTERDON	-12.5%	5.7%	6.5%		76.8%	-6.6%	-16.0%	0.3%	-8.9%	-8.2%		-11.6%	24	-6.3%	9.7%	24	-1.6%		
25 WARREN	-5.3%	38.7%	52.8%	0.0%	39.0%	2.7%	-5.8%	4.1%	23.1%	8.8%		-5.5%	25	-7.8%	13.8%	25	24.4%		
26 SUSSEX	-3.4%	43.7%	42.6%		237.7%	3.2%	-2.1%	-3.5%	42.1%	-9.2%		-3.8%	26	-6.4%	11.9%	26	20.2%		
27 NEW HAVEN	4.4%	35.1%	35.4%	33.9%	112.5%	13.4%	0.4%	2.0%	2.5%	2.1%	5.3%	5.2%	27	-8.0%	12.0%	27	2.1%		
28 MERCER	2.7%	16.2%	16.2%	10.0%	16.2%	6.0%	5.7%	-23.2%	-9.5%	-21.0%	3.4%	3.3%	28	-3.1%	11.8%	28	33.6%		
Total	6.1%	13.6%	14.5%	6.1%	37.8%	8.8%	2.2%	-0.9%	9.4%	0.0%	6.5%	6.3%	To	-2.5%	10.3%	Td	-2.0%		

APPENDIX B: BPM 2002 CALIBRATION PARAMETERS

Household – Auto Ownership – Journey Productions (HAJ) Model

Adjustments to Productions

During the application of the HAJ modeling step, the program reads the HAJ_JFC4.txt file from the 0_SetUp\2_LUT\1_HAJ directory. This file provides constants used to adjust productions by purpose at the district level. In this file, the reference value is 1. Values above 1 increase productions, while those below 1 decrease productions.

In the file, reproduced below as **Table B-1**, work productions (1-3) originating in Upper Manhattan are all increased by 15%, while school purposes (4) are unchanged. Westchester and Putnam county productions are generally decreased. Most non-New York City counties have work productions reduced slightly.

Table B-1: Journey Production Adjustment Factors – Current BPM Calibration

BPMDist1		CoName	Purp1	Purp2	Purp3	Purp4	Purp5	Purp6	Purp7	Purp8
0	1.1	Lower Man	1.3	1.3	1.3	1.2	1.2	1.3	1.5	1.25
1	1.2	Valley Man	1.3	1.3	1.2	1.2	1.2	1.3	1.5	1.25
2	1.3	Midtown Man	1.3	1.3	1.3	1.2	1.2	1.3	1.5	1.25
3	1.4	Upper Man	1.3	1.3	1.3	1.2	1.2	1.3	1.5	1.25
4	2	Queens	1	1	1	1	1	1.3	1.8	1.25
5	3	Bronx	1	1	1	1	1	1.3	1.8	1.25
6	4	Kings	1	1	1	1	1	1.3	1.6	1.25
7	5	Richmond	1	1	1	1	1	1.3	1.3	1.25
8	6	Nassau	1.1	1.1	1.1	1.1	1.1	1.3	1.6	1.25
9	7	Suffolk	1.1	1.1	1.1	1.1	1.1	1.3	1.3	1.25
10	8	Westchester	1	1	1	1	1	1	1	1.25
11	9	Rockland	1	1	1	1	1	1.1	1.1	1.25
12	10	Putnam	0.85	0.85	0.85	0.9	0.9	1	1	1.25
13	11	Orange	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.25
14	12	Dutchess	1	1	1	1	1	1	1	1.25
15	13	Fairfield	1	1	1	1	1	1	1	1.25
16	14	Bergen	1	1	1	1	1	1.1	1.3	1.25
17	15	Passaic	1	1	1	1	1	1.1	1.3	1.25
18	16	Hudson	1	1	1	1	1	1.1	1.3	1.25
19	17	Essex	1	1	1	1	1	1.1	1.3	1.25
20	18	Union	1	1	1	1	1	1.1	1.3	1.25
21	19	Morris	1	1	1	1	1	1.1	1.3	1.25
22	20	Somerset	1	1	1	1	1	1.1	1.3	1.25
23	21	Middlesex	1	1	1	1	1	1.1	1.3	1.25
24	22	Monmouth	1	1	1	1	1	1.1	1.3	1.25
25	23	Ocean	1	1	1	1	1	1.1	1.3	1.25
26	24	Hunterdon	1	1	1	1	1	1.1	1.3	1.25
27	25	Warren	1	1	1	1	1	1.1	1.3	1.25
28	26	Sussex	1	1	1	1	1	1.1	1.3	1.25
29	27	New Haven	1	1	1	1	1	1.1	1.1	1.25
30	28	Mercer	1	1	1	1	1	1.1	1.3	1.25

Mode-Destination Choice Model (MDSC)

For the Mode-Destination Choice model and its calibrated adjustment factors, there are four general types of adjustments which are applied on top of the basic mode and destination choice models developed the statistical estimation (ALOGIT).

First, the attractions may be adjusted upwards or downwards by use of a simple scaling factor that can be applied for selected zones. As part of the calibration of the Destination Choice model, distance scaling factors were used to improve to overall match of the model trip length distribution with the RT-HIS survey data estimates. Additionally, county to county k-factors were can be applied, and were in to a limited extent for the current BPM calibration. Finally, mode specific constants were applied to specific corridors to try to capture the observed modal shares by purpose. Of the three types of adjustment factors, the modal share factors will require the most explanation.

Adjustments to Attractions

BPM attractions may be adjusted upwards or downwards by use of a simple scaling factor that can be applied for selected zones, by tour purpose. While the adjustment can be made at the individual zonal level, in the current BPM calibration all adjustments were applied at the district level. The

A short sample of the attractions adjustment file (for Purpose 1) is reproduced below.

TAZ	CORR_FAC
1	1.000000
2	1.000000
3	1.000000
4	1.000000
5	1.000000
6	1.000000
7	1.000000
8	1.000000
9	1.000000
10	1.000000
11	1.050000
12	1.000000
13	1.000000
14	1.050000
15	1.050000
16	1.050000
17	1.050000
18	1.050000
19	1.050000

The following **Table B-2** represents the adjustments made by district for each travel purpose for the current BPM Base Year 2002 calibration.

Table B-2 - Correction Factors for Attractions – District Level – Current BPM Calibration

	BPM District	Purpose 1	Purpose 2	Purpose 3	Purpose 4	Purpose 5	Purpose 6	Purpose 7	Purpose 8
0	Lower Man	1	1	1	1	1.5	1	1	1
1	Valley Man	1	1	1	1	1.5	1	1	1
2	Midtown Man	1	1	1	1	1.5	1	1	1
3	Upper Man	1	1	1	1	1.5	1	1	1
4	Queens	0.95	0.95	0.95	1	1	0.95	0.95	1
5	Bronx	1	1	1	1	1	1.1	1.1	1
6	Kings	1	1	1	1	1	1	1	1
7	Richmond	1	1.2	1	1	1	1	1.1	1
8	Nassau	1	1	1	1	1	1	1	1
9	Suffolk	1	1.1	1.1	1	1	1.1	1.05	1
10	Westchester	1	1	1	1	1	1	1	1
11	Rockland	1	1	1	1	1	1	1	1
12	Putnam	1	1	1	1	1	0.9	0.9	1
13	Orange	1	1	1	1	1	1	1	1
14	Dutchess	1	1	1	1	1	1	1	1
15	Fairfield	1	1.1	1.05	1	1	1.05	1.05	1
16	Bergen	1	0.95	0.95	1	1	0.95	0.95	1
17	Passaic	1	1	1	1	1	0.9	0.9	1
18	Hudson	1	1	1	1	1	1	1	1
19	Essex	1	1	1	1	1	1	1	1
20	Union	1	1	1	1	1	1	1	1
21	Morris	1	1	1	1	1	1	1	1
22	Somerset	1	1	1	1	1	1	1	1
23	Middlesex	1	1	1	1	1	1	1	1
24	Monmouth	1	1	1	1	1	1	1	1
25	Ocean	1	1	1	1	1	1	1	1
26	Hunterdon	1	1	1	1	1	1	1	1
27	Warren	1	1	1	1	1	1	1	1
28	Sussex	1	1	1	1	1	1	1	1
29	New Haven	1	1.05	1.05	1	1	1.05	1.05	1
30	Mercer	1	1	1	1	1	1	1	1

Distance Adjustments

Distance scaling factors can be applied as part of the BPM Destination Choice model in order to more closely match observed tour length distributions. Without any distance scaling, model trip lengths were generally longer than found in the RT-HIS data used for calibration. For the current calibration, distance factors were applied by county (1-28) of tour origin. Each purpose has a different set of distance factors that are a component of the utility expression for any Origin-Destination zonal interchange. These factors consist of a linear component and a non-linear component. The linear component tends to shorten all tour distances, but has the greatest impact for tours under 5 miles. The base value is 0, and all values developed in calibration are slightly less than 0 (it would be possible to increase tour distances as well). The largest linear distance adjustments are applied to purposes 3 (high income work), 4 (school) and 6 (maintenance).

The second component is a non-linear component that shortens the “tail” of the trip length distributions and generally has the greatest impact on tours longer than 20 miles. For this component, a value of 1 is the reference value. Values larger than 1 act to shorten the tail end of the distribution. In general, the non-linear component in the BPM calibration varies more by county than does the linear component, which often has the same value for all counties. The purpose with the highest non-linear adjustment factors is purpose 1 (low income work). The **Table B-3** below reproduces the format of the actual distance factor file for purpose 1 as used by the BPM, while **Table B-4** summarizes the values of the distance adjustment factors for all purposes.

Table B-3 - Distance Factor Adjustments for Purpose 1: Work – Low Income

BPMCo	Dist_Lin	Dist_NLin
1	-0.000	1.00
2	-0.010	1.25
3	-0.020	1.50
4	-0.010	1.25
5	-0.020	2.00
6	-0.020	2.00
7	-0.020	2.00
8	-0.035	2.00
9	-0.040	2.00
10	-0.040	2.00
11	-0.025	2.00
12	-0.025	2.00
13	-0.040	2.00
14	-0.025	1.75
15	-0.025	1.75
16	-0.025	1.75
17	-0.025	1.75
18	-0.025	1.75
19	-0.025	1.75
20	-0.025	1.75
21	-0.025	1.75
22	-0.025	1.75
23	-0.025	1.75
24	-0.025	1.75
25	-0.025	1.75
26	-0.025	1.75
27	-0.040	2.00
28	-0.025	1.75

Table B4 - Summary of Distance Factor Adjustments for All Purposes

BPMCo	Purpose 1		Purpose 2		Purpose 3		Purpose 4		Purpose 5		Purpose 6		Purpose 7		Purpose 8	
	Dist_Lin	Dist_NLin	Dist_Lin	Dist_NLin	Dist_Lin	Dist_NLin	Dist_Lin	Dist_NLin	Dist_Lin	Dist_NLin	Dist_Lin	Dist_NLin	Dist_Lin	Dist_NLin	Dist_Lin	Dist_NLin
1	0	1	-0.01	1	-0.01	1	-0.04	1.4	-0.015	1.75	-0.04	1.1	-0.02	1.1	-0.02	1.1
2	-0.01	1.25	-0.01	1	-0.01	1	-0.04	1.4	-0.015	1.5	-0.05	1.1	-0.02	1.1	-0.02	1.1
3	-0.02	1.5	-0.03	1.1	-0.04	1.1	-0.04	1.4	-0.015	1.75	-0.04	1.1	-0.02	1.1	-0.02	1.1
4	-0.01	1.25	-0.01	1	-0.01	1	-0.04	1.4	-0.015	1.5	-0.04	1.1	-0.02	1.1	-0.02	1.1
5	-0.02	2	-0.04	1.25	-0.06	1.25	-0.04	1.4	-0.015	1.75	-0.06	1.5	-0.05	1.4	-0.02	1.1
6	-0.02	2	-0.04	1.2	-0.06	1.2	-0.04	1.4	-0.01	1.25	-0.05	1.1	-0.03	1.1	-0.02	1.1
7	-0.02	2	-0.045	1.25	-0.065	1.25	-0.04	1.4	-0.015	1.5	-0.05	1.2	-0.03	1.2	-0.02	1.1
8	-0.035	2	-0.055	1.25	-0.07	1.25	-0.04	1.4	-0.015	1.75	-0.06	1.5	-0.05	1.5	-0.02	1.1
9	-0.04	2	-0.055	1.25	-0.075	1.25	-0.04	1.4	-0.015	1.75	-0.07	1.5	-0.06	1.5	-0.02	1.3
10	-0.04	2	-0.055	1.25	-0.075	1.25	-0.04	1.4	-0.015	1.75	-0.07	1.5	-0.06	1.5	-0.02	1.3
11	-0.025	2	-0.055	1.1	-0.06	1.1	-0.04	1.4	-0.015	1.75	-0.06	1.3	-0.04	1.3	-0.02	1.1
12	-0.025	2	-0.055	1.1	-0.06	1.1	-0.04	1.4	-0.015	1.75	-0.06	1.3	-0.04	1.3	-0.02	1.1
13	-0.04	2	-0.055	1.25	-0.075	1.25	-0.04	1.4	-0.015	1.75	-0.07	1.5	-0.06	1.5	-0.02	1.3
14	-0.025	1.75	-0.05	1.1	-0.055	1.1	-0.04	1.4	-0.015	1.75	-0.06	1.2	-0.04	1.2	-0.02	1.1
15	-0.025	1.75	-0.05	1.1	-0.055	1.1	-0.04	1.4	-0.015	1.75	-0.06	1.2	-0.04	1.2	-0.02	1.1
16	-0.025	1.75	-0.05	1.1	-0.055	1.1	-0.04	1.4	-0.015	1.75	-0.06	1.2	-0.04	1.2	-0.02	1.1
17	-0.025	1.75	-0.05	1.1	-0.055	1.1	-0.04	1.4	-0.015	1.75	-0.06	1.2	-0.04	1.2	-0.02	1.1
18	-0.025	1.75	-0.05	1.1	-0.055	1.1	-0.04	1.4	-0.015	1.75	-0.06	1.2	-0.04	1.2	-0.02	1.1
19	-0.025	1.75	-0.05	1.1	-0.055	1.1	-0.04	1.4	-0.015	1.75	-0.06	1.2	-0.04	1.2	-0.02	1.1
20	-0.025	1.75	-0.05	1.1	-0.055	1.1	-0.04	1.4	-0.015	1.75	-0.06	1.2	-0.04	1.2	-0.02	1.1
21	-0.025	1.75	-0.05	1.1	-0.055	1.1	-0.04	1.4	-0.015	1.75	-0.06	1.2	-0.04	1.2	-0.02	1.1
22	-0.025	1.75	-0.05	1.1	-0.055	1.1	-0.04	1.4	-0.015	1.75	-0.06	1.2	-0.04	1.2	-0.02	1.1
23	-0.025	1.75	-0.05	1.1	-0.055	1.1	-0.04	1.4	-0.015	1.75	-0.06	1.2	-0.04	1.2	-0.02	1.1
24	-0.025	1.75	-0.05	1.1	-0.055	1.1	-0.04	1.4	-0.015	1.75	-0.06	1.2	-0.04	1.2	-0.02	1.1
25	-0.025	1.75	-0.05	1.1	-0.055	1.1	-0.04	1.4	-0.015	1.75	-0.06	1.2	-0.04	1.2	-0.02	1.1
26	-0.025	1.75	-0.05	1.1	-0.055	1.1	-0.04	1.4	-0.015	1.75	-0.06	1.2	-0.04	1.2	-0.02	1.1
27	-0.04	2	-0.055	1.25	-0.055	1.25	-0.04	1.4	-0.015	1.75	-0.07	1.5	-0.06	1.5	-0.02	1.3
28	-0.025	1.75	-0.05	1.1	-0.055	1.1	-0.04	1.4	-0.015	1.75	-0.06	1.2	-0.04	1.2	-0.02	1.1

County-to-County Adjustments

For the origin-destination county-to-county constants that are part of the utility expressions in the Destination Choice model, zero is the reference value. Positive numbers increase the utility of a targeted origin-destination interchange, and the probability of selection of a destination in that district, while negative values add disutility to the destination choice. With or without the county-to-county constants, in the BPM Destination Choice model, origin productions are constrained for all purposes and remain unchanged. For Work, School and University tours (Purposes 1-3, 4 and 5), destinations attractions are also fully constrained to attractions, while for Maintenance, Discretionary, and At-Work tours (Purposes 5, 6 and 8), a “relaxed” constraint is applied. Consequently, the origin-destination distribution pattern resulting from the BPM Destination choice model will reflect a matrix balancing that affects the interchanges for which no county-to-county constant is applied.

The table describing the county-to-county constants for each tour purpose is essentially a square matrix, with a first column added that contains the values for the intra-district adjustment factor, typically the largest of all district-to-district interchanges. The input table is structured this way for the ease of reading in a single column for intra-district travel, rather than along the diagonal. If values in the first column are changed, however, then the changes must also be made to the diagonal. A full set of the tables of county-to-county constants as developed for the current BPM calibration are found in **Tables B-5.1 – B-5.8**.

APPENDIX B: Table B-5- 1

BPM Base Year Re-Calibration: Stage 3 / RC-BPM-55G

County-to-County Constants - Purpose 1: Work / Low Income

Origin District	Destination District																															
	INTRA	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
0 Lower Man	-1	-1	-1	-1	-1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1 Valley Man	-1	-1	-1	-1	-1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2 Midtown Man	-1	-1	-1	-1	-1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3 Upper Man	-1	-1	-1	-1	-1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4 Queens	0.3	0	0	0	0	0.3	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5 Bronx	0	0	0	0	0	0	0	0	0	-0.5	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6 Kings	0.5	0	0	0	0	0	0	0.5	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7 Richmond	-0.085	0	0	0	0	0	0	0	-0.085	0	0	0	0	0	0	0	0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0	0	0	0	0	0	
8 Nassau	-0.5	0	0	0	0	0	-0.5	0	0	-0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
9 Suffolk	-0.5	0	0	0	0	0	-1	0	0	0	-0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10 Westchester	0.5	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0.5	0.7	0	0	0	1	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	
11 Rockland	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	
12 Putnam	1.5	0	0	0	0	0	0	0	0	0	0	0.5	0	-1	0	0	-1	0	0	0	0	0	0	0	0	0	0	0	0	-1	0	
13 Orange	0	0	0	0	0	0.5	1	0.5	0	0	0	0.5	0.5	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
14 Dutchess	0.385	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.385	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	-1	0
15 Fairfield	1.5	0	0	0	0	0	0	0	0	0	0	2.5	0	-0.5	0	0	1.35	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16 Bergen	-0.345	0	0	0	0	0	0	0	-0.6	0	0	0.5	-1	-1	-1	0	0	-0.345	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17 Passaic	0	-0.5	-0.5	-0.5	-0.5	0	0	0	-0.6	0	0	0	-1	-1	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18 Hudson	-0.5	0	0	0	0	0	0	0	-0.6	0	0	0.5	-1	-1	-1	0	0	0	0	-0.5	0	0	0	0	0	0	0	0	0	0	0	0
19 Essex	0	0	0	0	0	0	0	0	-0.8	0	0	0.5	-1	-1	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20 Union	0	0	0	0	0	0	0	0	-0.8	0	0	0	-1	-1	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21 Morris	0	0	0	0	0	0	0	0	-0.8	0	0	0	-1	-1	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22 Somerset	-0.5	0	0	0	0	0	0	0	-0.8	0	0	0	-1	-1	-1	0	0	0	0	0	0	0	0	0	-0.5	0	0	0	0	0	0	0
23 Middlesex	-0.5	0	0	0	0	0	0	0	-0.8	0	0	0	-1	-1	-1	0	0	0	0	0	0	0	0	0	0	-0.5	0	0	0	0	0	0
24 Monmouth	0	0	0	0	0	0	0	0	0	0	0	0	-1	-1	-1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
25 Ocean	0.5	-0.5	-0.5	-0.5	-0.5	0	0	-1	-1	0	0	0	-1	-1	-1	0	0	0	0	0	0	0	0	0	0	0	1	0.5	0	0	0	0
26 Hunterdon	-0.5	0	0	0	0	0	0	0	0	0	0	0	-1	-1	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	-0.5	0	0	0
27 Warren	0	0	0	0	0	0	0	0	0	0	0	0	-1	-1	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28 Sussex	0	0	0	0	0	0	0	0	0	0	0	0	-1	-1	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29 New Haven	1	-3	-3	-3	-3	0	-3	0	0	0	0	0	0	0	0	-0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
30 Mercer	0.25	0	0	0	0	0	0	0	0	0	0	0	-1	-1	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.25

APPENDIX B: Table B-5- 2

BPM Base Year Re-Calibration: Stage 3 / RC-BPM-55G

County-to-County Constants - Purpose 2: Work / Medium Income

Origin District	Destination District																															
	INTRA	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
0 Lower Man	-1	-1	-1	-1	-1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1 Valley Man	-1	-1	-1	-1	-1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2 Midtown Man	-1	-1	-1	-1	-1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3 Upper Man	-1	-1	-1	-1	-1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4 Queens	0.3	0	0	0	0	0.3	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5 Bronx	0	0	0	0	0	0.5	0	0	0	-0.5	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6 Kings	0.5	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7 Richmond	-0.835	0	0	0	0	0	0	0.5	-0.835	0	0	0	0	0	0	0	0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0	0	0	0	0	0	
8 Nassau	-0.5	0	0	0	0	0	-0.5	0	0	-0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
9 Suffolk	-0.5	0	0	0	0	0	-1	0	0	0	-0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10 Westchester	0.5	-1	-1	-1	-1	-1	-1	-1	-1	-1	0.5	0.7	0	0	0	0	1	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	
11 Rockland	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	1	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	
12 Putnam	1.5	0	0	0	0	0	0	0	0	0	0	0.5	0	1	0	0	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	-1	
13 Orange	0	0	0	0	0	0.5	1	0.5	0	0	0	0.5	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
14 Dutchess	-1.17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1.17	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	-1	
15 Fairfield	1.5	0	0	0	0	0	0	0	0	0	0	2.5	0	-0.5	0	0	0.75	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	
16 Bergen	-1.345	0	0	0	0	0	0	0	-0.6	0	0	0.5	-1	-1	-1	0	0	-1.345	0	0	0	0	0	0	0	0	0	0	0	0	0	
17 Passaic	0	-0.5	-0.5	-0.5	-0.5	0	0	0	-0.6	0	0	0	-1	-1	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
18 Hudson	-1.1	0	0	0	0	0	0	0	-0.6	0	0	0.5	-1	-1	-1	0	0	0	0	-1.1	0	0	0	0	0	0	0	0	0	0	0	
19 Essex	-0.65	0	0	0	0	0	0	0	-0.8	0	0	0.5	-1	-1	-1	0	0	0	0	0	-0.65	0	0	0	0	0	0	0	0	0	0	
20 Union	0.25	0	0	0	0	0	0	0	-0.8	0	0	0	-1	-1	-1	0	0	0	0	0	0	0.25	0	0	0	0	0	0	0	0	0	
21 Morris	-1.25	0	0	0	0	0	0	0	-0.8	0	0	0	-1	-1	-1	0	0	0	0	0	0	0	-1.25	0	0	0	0	0	0	0	0	
22 Somerset	-1	0	0	0	0	0	0	0	-0.8	0	0	0	-1	-1	-1	0	0	0	0	0	0	0	0	-1	0	0	0	0	0	0	0	
23 Middlesex	-0.75	0	0	0	0	0	0	0	-0.8	0	0	0	-1	-1	-1	0	0	0	0	0	0	0	0	-0.75	0	0	0	0	0	0	0	
24 Monmouth	0.25	0	0	0	0	0	0	0	0	0	0	0	-1	-1	-1	0	0	0	0	0	0	0	0	0	0	0.25	1	0	0	0	0	
25 Ocean	0.5	-0.5	-0.5	-0.5	-0.5	0	0	-1	-1	0	0	0	-1	-1	-1	0	0	0	0	0	0	0	0	0	0	0	1	0.5	0	0	0	
26 Hunterdon	-1.25	0	0	0	0	0	0	0	0	0	0	0	-1	-1	-1	0	0	0	0	0	0	0	0	0	0	0	0	-1.25	0	0	0	
27 Warren	-1.25	0	0	0	0	0	0	0	0	0	0	0	-1	-1	-1	0	0	0	0	0	0	0	0	0	0	0	0	-1.25	0	0	0	
28 Sussex	-0.5	0	0	0	0	0	0	0	0	0	0	0	-1	-1	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	-0.5	0	0	
29 New Haven	1.65	-3	-3	-3	-3	0	-3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.65	0	
30 Mercer	-0.5	0	0	0	0	0	0	0	0	0	0	0	-1	-1	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-0.5	

APPENDIX B: Table B-5- 3

BPM Base Year Re-Calibration: Stage 3 / RC-BPM-55G

County-to-County Constants - Purpose 3: Work / High Income

Origin District	Destination District																																			
	INTRA	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30				
0 Lower Man	-1	-1	-1	-1	-1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
1 Valley Man	-1	-1	-1	-1	-1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
2 Midtown Man	-1	-1	-1	-1	-1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
3 Upper Man	-1	-1	-1	-1	-1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
4 Queens	0.3	0	0	0	0	0.3	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
5 Bronx	0.375	0	0	0	0	0	0.375	0	0	-0.5	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
6 Kings	0.5	0	0	0	0	0	0	0.5	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7 Richmond	0.915	0	0	0	0	0	0	0	0.915	0	0	0	0	0	0	0	0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0	0	0	0	0	0	0	0	0	
8 Nassau	-0.5	0	0	0	0	0	-0.5	0	0	-0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
9 Suffolk	-0.5	0	0	0	0	0	-1	0	0	0	-0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10 Westchester	0.5	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0.5	0.7	0	0	0	0	1	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11 Rockland	1.65	0	0	0	0	0	0	0	0	0	0	2	1.65	0	0	0	1	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	0	-2		
12 Putnam	1.5	0	0	0	0	0	0	0	0	0	0	0.5	0	1	0	0	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1	0	
13 Orange	0	0	0	0	0	0.5	1	0.5	0	0	0	0.5	0.5	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
14 Dutchess	-0.215	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-0.215	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1	0	
15 Fairfield	1.5	0	0	0	0	0	0	0	0	0	0	2.5	0	-0.5	0	0	1.25	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
16 Bergen	0.405	0	0	0	0	0	0	0	-0.6	0	0	0.5	-1	-1	-1	0	0	0.405	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17 Passaic	-0.15	-0.5	-0.5	-0.5	-0.5	0	0	0	-0.6	0	0	0	-1	-1	-1	0	0	0	-0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18 Hudson	0	0	0	0	0	0	0	0	-0.6	0	0	0.5	-1	-1	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19 Essex	-0.75	0	0	0	0	0	0	0	-0.8	0	0	0.5	-1	-1	-1	0	0	0	0	0	0	-0.75	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20 Union	-0.25	0	0	0	0	0	0	0	-0.8	0	0	0	-1	-1	-1	0	0	0	0	0	0	0	-0.25	0	0	0	0	0	0	0	0	0	0	0	0	0
21 Morris	0.5	0	0	0	0	0	0	0	-0.8	0	0	0	-1	-1	-1	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0
22 Somerset	0	0	0	0	0	0	0	0	-0.8	0	0	0	-1	-1	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23 Middlesex	-0.5	0	0	0	0	0	0	0	-0.8	0	0	0	-1	-1	-1	0	0	0	0	0	0	0	0	0	0	-0.5	0	0	0	0	0	0	0	0	0	0
24 Monmouth	0.25	0	0	0	0	0	0	0	0	0	0	0	0	-1	-1	-1	0	0	0	0	0	0	0	0	0	0	0.25	1	0	0	0	0	0	0	0	0
25 Ocean	0	-0.5	-0.5	-0.5	-0.5	0	0	-1	-1	0	0	0	-1	-1	-1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
26 Hunterdon	0.5	0	0	0	0	0	0	0	0	0	0	0	-1	-1	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0
27 Warren	0.25	0	0	0	0	0	0	0	0	0	0	0	-1	-1	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.25	0	0	0	0	0
28 Sussex	1.5	0	0	0	0	0	0	0	0	0	0	0	-1	-1	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.5	0	0	0	0
29 New Haven	1	-3	-3	-3	-3	0	-3	0	0	0	0	0	0	0	0	0	-0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
30 Mercer	-1	0	0	0	0	0	0	0	0	0	0	0	-1	-1	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1

APPENDIX B: Table B-5- 4

BPM Base Year Re-Calibration: Stage 3 / RC-BPM-55G

County-to-County Constants - Purpose 4: School

Origin District	Destination District																															
	INTRA	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
0 Lower Man	1.25	1.25	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1 Valley Man	0.25	0	0.25	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2 Midtown Man	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3 Upper Man	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4 Queens	0	0	0	0	0	0	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5 Bronx	0	0	0	0	0	-1	0	0	0	-0.5	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6 Kings	0.5	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 Richmond	-0.75	0	0	0	0	0	0	0	-0.75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 Nassau	-0.25	0	0	0	0	0	-0.5	0	0	-0.25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9 Suffolk	-0.25	0	0	0	0	0	-1	0	0	0	-0.25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10 Westchester	0.5	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0.5	0.7	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 Rockland	0.5	0	0	0	0	0	0	0	0	0	0	2	0.5	0	0	0	0	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2
12 Putnam	1.5	0	0	0	0	0	0	0	0	0	0	0.5	0	1	0	0	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	-1	0
13 Orange	0	0	0	0	0	0	0.5	0	0	0	0	0.5	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14 Dutchess	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15 Fairfield	1.5	0	0	0	0	0	0	0	0	0	0	1.5	0	-0.5	0	0	-1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16 Bergen	1	0	0	0	0	0	0	0	0	0	0	0	-1	-1	-1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17 Passaic	1.25	0	0	0	0	0	0	0	0	0	0	0	-1.5	-1.5	-1.5	0	0	0	1.25	0	0	0	0	0	0	0	0	0	0	0	0	0
18 Hudson	0.5	0	0	0	0	0	0	0	0	0	0	0	-1.5	-1.5	-1.5	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0
19 Essex	0.5	0	0	0	0	0	0	0	0	0	0	0	-1.5	-1.5	-1.5	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0
20 Union	0	0	0	0	0	0	0	0	0	0	0	0	-1.5	-1.5	-1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21 Morris	0	0	0	0	0	0	0	0	0	0	0	0	-1.5	-1.5	-1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22 Somerset	0	0	0	0	0	0	0	0	0	0	0	0	-1.5	-1.5	-1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23 Middlesex	0	0	0	0	0	0	0	0	0	0	0	0	-1.5	-1.5	-1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24 Monmouth	0	0	0	0	0	0	0	0	0	0	0	0	-1.5	-1.5	-1.5	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0
25 Ocean	0	0	0	0	0	0	0	0	0	0	0	0	-1.5	-1.5	-1.5	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0
26 Hunterdon	0	0	0	0	0	0	0	0	0	0	0	0	-1.5	-1.5	-1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27 Warren	0	0	0	0	0	0	0	0	0	0	0	0	-1.5	-1.5	-1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28 Sussex	-0.5	0	0	0	0	0	0	0	0	0	0	0	-1.5	-1.5	-1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-0.5	0
29 New Haven	0	0	0	0	0	0	0	0	0	0	0	0	0	-0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30 Mercer	0	0	0	0	0	0	0	0	0	0	0	0	-1.5	-1.5	-1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

APPENDIX B: Table B-5- 5

BPM Base Year Re-Calibration: Stage 3 / RC-BPM-55G

County-to-County Constants - Purpose 5: University

Origin District	Destination District																																
	INTRA	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
0 Lower Man	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1 Valley Man	0.75	0	0.75	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2 Midtown Man	1.65	0	0	1.65	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
3 Upper Man	1.25	0	0	0	1.25	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4 Queens	-1.25	0	0	0	0	-1.25	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5 Bronx	0	0	0	0	0	-1	0	0	0	-0.5	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6 Kings	1.5	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7 Richmond	0.75	0	0	0	0	0	0	0	0.75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8 Nassau	0.75	0	0	0	0	0	-0.5	0	0	0.75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9 Suffolk	-0.5	0	0	0	0	0	-1	0	0	0	-0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10 Westchester	-0.75	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-0.75	0.7	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11 Rockland	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	
12 Putnam	1.5	0	0	0	0	0	0	0	0	0	0.5	0	1	0	0	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1	0	
13 Orange	-1.5	0	0	0	0	0	0.5	0	0	0	0	0.5	0.5	0	-1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
14 Dutchess	-1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
15 Fairfield	1.5	0	0	0	0	0	0	0	0	0	0	1.5	0	-0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
16 Bergen	0.25	0	0	0	0	0	0	0	0	0	0	0	-1	-1	-1	0	0	0.25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
17 Passaic	0.75	0	0	0	0	0	0	0	0	0	0	0	-1.5	-1.5	-1.5	0	0	0	0.75	0	0	0	0	0	0	0	0	0	0	0	0	0	
18 Hudson	-0.25	0	0	0	0	0	0	0	0	0	0	0	-1.5	-1.5	-1.5	0	0	0	0	-0.25	0	0	0	0	0	0	0	0	0	0	0	0	
19 Essex	1.25	0	0	0	0	0	0	0	0	0	0	0	-1.5	-1.5	-1.5	0	0	0	0	0	1.25	0	0	0	0	0	0	0	0	0	0	0	
20 Union	0.25	0	0	0	0	0	0	0	0	0	0	0	-1.5	-1.5	-1.5	0	0	0	0	0	0	0.25	0	0	0	0	0	0	0	0	0	0	
21 Morris	-0.25	0	0	0	0	0	0	0	0	0	0	0	-1.5	-1.5	-1.5	0	0	0	0	0	0	0	-0.25	0	0	0	0	0	0	0	0	0	
22 Somerset	0.75	0	0	0	0	0	0	0	0	0	0	0	-1.5	-1.5	-1.5	0	0	0	0	0	0	0	0	0.75	0	0	0	0	0	0	0	0	
23 Middlesex	-0.25	0	0	0	0	0	0	0	0	0	0	0	-1.5	-1.5	-1.5	0	0	0	0	0	0	0	0	0	-0.25	0	0	0	0	0	0	0	
24 Monmouth	0	0	0	0	0	0	0	0	0	0	0	0	-1.5	-1.5	-1.5	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0	
25 Ocean	0	0	0	0	0	0	0	0	0	0	0	0	-1.5	-1.5	-1.5	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0	
26 Hunterdon	-1.5	0	0	0	0	0	0	0	0	0	0	0	-1.5	-1.5	-1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	-1.5	0	0	0	
27 Warren	0	0	0	0	0	0	0	0	0	0	0	0	-1.5	-1.5	-1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
28 Sussex	-1	0	0	0	0	0	0	0	0	0	0	0	-1.5	-1.5	-1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1	0	0	
29 New Haven	-1.65	0	0	0	0	0	0	0	0	0	0	0	0	-0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1.5	0	
30 Mercer	-1.75	0	0	0	0	0	0	0	0	0	0	0	-1.5	-1.5	-1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1.75	

APPENDIX B: Table B-5- 6

BPM Base Year Re-Calibration: Stage 3 / RC-BPM-55G

County-to-County Constants - Purpose 6: Maintenance

Origin District	Destination District																															
	INTRA	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
0 Lower Man	0.57	0.57	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1 Valley Man	1.37	0	1.37	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2 Midtown Man	-0.45	0	0	-0.45	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3 Upper Man	0.635	0	0	0	0.635	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4 Queens	-1.515	0	0	0	0	-1.515	-1	-1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5 Bronx	0	0	0	0	0	-1	0	0	0	-0.5	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6 Kings	-0.885	0	0	0	0	-1.5	0	-0.885	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 Richmond	-1.085	0	0	0	0	0	0	0	-1.085	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 Nassau	-0.5	0	0	0	0	0	-0.5	0	0	-0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9 Suffolk	-0.5	0	0	0	0	0	-1	0	0	0	-0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10 Westchester	-0.5	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-0.5	0.7	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 Rockland	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	0	-2
12 Putnam	1.5	0	0	0	0	0	0	0	0	0	0	0.5	0	1	0	0	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	-1	0
13 Orange	-0.5	0	0	0	0	0	0.5	0	0	0	0	0.5	0.5	0	-0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14 Dutchess	-1.42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1.42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15 Fairfield	0	0	0	0	0	0	0	0	0	0	0	1.5	0	-0.5	0	0	-0.75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16 Bergen	-1.345	0	0	0	0	0	0	0	0	0	0	0	-1	-1	-1	0	0	-1.345	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17 Passaic	-1.25	0	0	0	0	0	0	0	0	0	0	0	-1	-1	-1	0	0	0	-1.25	0	0	0	0	0	0	0	0	0	0	0	0	0
18 Hudson	-1.65	0	0	0	0	0	0	0	0	0	0	0	-1	-1	-1	0	0	0	0	-1.65	0	0	0	0	0	0	0	0	0	0	0	0
19 Essex	-1.25	0	0	0	0	0	0	0	0	0	0	0	-1	-1	-1	0	0	0	0	0	-1.25	0	0	0	0	0	0	0	0	0	0	0
20 Union	-1	0	0	0	0	0	0	0	0	0	0	0	-1	-1	-1	0	0	0	0	0	0	-1	0	0	0	0	0	0	0	0	0	0
21 Morris	-1.65	0	0	0	0	0	0	0	0	0	0	0	-1	-1	-1	0	0	0	0	0	0	0	-1.65	0	0	0	0	0	0	0	0	0
22 Somerset	-1	0	0	0	0	0	0	0	0	0	0	0	-1	-1	-1	0	0	0	0	0	0	0	0	-1	0	0	0	0	0	0	0	0
23 Middlesex	-1.65	0	0	0	0	0	0	0	0	0	0	0	-1	-1	-1	0	0	0	0	0	0	0	0	0	-1.65	0	0	0	0	0	0	0
24 Monmouth	0	0	0	0	0	0	0	0	0	0	0	0	-1	-1	-1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
25 Ocean	0	0	0	0	0	0	0	0	0	0	0	0	-1	-1	-1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
26 Hunterdon	-1.25	0	0	0	0	0	0	0	0	0	0	0	-1	-1	-1	0	0	0	0	0	0	0	0	0	0	0	0	-1.25	0	0	0	0
27 Warren	-1.25	0	0	0	0	0	0	0	0	0	0	0	-1	-1	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	-1.25	0	0	0
28 Sussex	-1.65	0	0	0	0	0	0	0	0	0	0	0	-1	-1	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1.65	0	0
29 New Haven	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0
30 Mercer	-1.6	0	0	0	0	0	0	0	0	0	0	0	-1	-1	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1.6

APPENDIX B: Table B-5- 7

BPM Base Year Re-Calibration: Stage 3 / RC-BPM-55G

County-to-County Constants - Purpose 7: Discretionary

Origin District	Destination District																															
	INTRA	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
0 Lower Man	0.07	0.07	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1 Valley Man	1.12	0	1.12	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2 Midtown Man	-1.45	0	0	-1.45	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3 Upper Man	0.13	0	0	0	0.13	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4 Queens	-1.365	0	0	0	0	-1.365	-1	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5 Bronx	0	0	0	0	0	-1	0	0	0	-0.5	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6 Kings	-0.635	0	0	0	0	-1	0	-0.635	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 Richmond	-0.585	0	0	0	0	0	0	0	-0.585	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 Nassau	-0.5	0	0	0	0	0	-0.5	0	0	-0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9 Suffolk	-0.5	0	0	0	0	0	-1	0	0	0	-0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10 Westchester	-0.5	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-0.5	0.7	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 Rockland	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	0	-2
12 Putnam	1.5	0	0	0	0	0	0	0	0	0	0	0.5	0	1	0	0	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	-1	0
13 Orange	0	0	0	0	0	0	0.5	0	0	0	0	0.5	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14 Dutchess	-1.65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1.665	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15 Fairfield	0	0	0	0	0	0	0	0	0	0	0	1.5	0	-0.5	0	0	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16 Bergen	-1.345	0	0	0	0	0	0	0	0	0	0	0	-1	-1	-1	0	0	-1.345	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17 Passaic	-0.5	0	0	0	0	0	0	0	0	0	0	0	-1	-1	-1	0	0	0	-0.5	0	0	0	0	0	0	0	0	0	0	0	0	0
18 Hudson	-0.75	0	0	0	0	0	0	0	0	0	0	0	-1	-1	-1	0	0	0	0	-0.75	0	0	0	0	0	0	0	0	0	0	0	0
19 Essex	-1	0	0	0	0	0	0	0	0	0	0	0	-1	-1	-1	0	0	0	0	0	-1	0	0	0	0	0	0	0	0	0	0	0
20 Union	-0.75	0	0	0	0	0	0	0	0	0	0	0	-1	-1	-1	0	0	0	0	0	0	-0.75	0	0	0	0	0	0	0	0	0	0
21 Morris	-0.5	0	0	0	0	0	0	0	0	0	0	0	-1	-1	-1	0	0	0	0	0	0	0	0	-0.5	0	0	0	0	0	0	0	0
22 Somerset	-0.75	0	0	0	0	0	0	0	0	0	0	0	-1	-1	-1	0	0	0	0	0	0	0	0	-0.75	0	0	0	0	0	0	0	0
23 Middlesex	-1	0	0	0	0	0	0	0	0	0	0	0	-1	-1	-1	0	0	0	0	0	0	0	0	0	-1	0	0	0	0	0	0	0
24 Monmouth	0	0	0	0	0	0	0	0	0	0	0	0	-1	-1	-1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
25 Ocean	0	0	0	0	0	0	0	0	0	0	0	0	-1	-1	-1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
26 Hunterdon	-1.5	0	0	0	0	0	0	0	0	0	0	0	-1	-1	-1	0	0	0	0	0	0	0	0	0	0	0	0	-1.5	0	0	0	0
27 Warren	-1.5	0	0	0	0	0	0	0	0	0	0	0	-1	-1	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	-1.5	0	0	0
28 Sussex	-1.3	0	0	0	0	0	0	0	0	0	0	0	-1	-1	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1.3	0	0
29 New Haven	-0.75	0	0	0	0	0	0	0	0	0	0	0	0	-0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-0.75	0
30 Mercer	-1	0	0	0	0	0	0	0	0	0	0	0	-1	-1	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1

APPENDIX B: Table B-5- 8

BPM Base Year Re-Calibration: Stage 3 / RC-BPM-55G

County-to-County Constants - Purpose 8: At-Work

Origin District	Destination District																																		
	INTRA	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30			
0 Lower Man	1	1	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
1 Valley Man	1	0	1	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2 Midtown Man	1	0	0	1	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
3 Upper Man	1	0	0	0	1	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4 Queens	0	0	0	0	0	0	-1	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5 Bronx	0.5	0	0	0	0	-1	0.5	0	0	-0.5	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6 Kings	0.5	0	0	0	0	-1	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7 Richmond	0.75	0	0	0	0	0	0	0	0.75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8 Nassau	-0.5	0	0	0	0	0	-0.5	0	0	-0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
9 Suffolk	-0.5	0	0	0	0	0	-1	0	0	0	-0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10 Westchester	-0.75	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-0.75	0.7	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11 Rockland	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	0	-2		
12 Putnam	1.5	0	0	0	0	0	0	0	0	0	0	0.5	0	1	0	0	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1	0	
13 Orange	0	0	0	0	0	0	0.5	0	0	0	0	0.5	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
14 Dutchess	-0.75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-0.75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
15 Fairfield	1.5	0	0	0	0	0	0	0	0	0	0	1.5	0	-0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
16 Bergen	-0.75	0	0	0	0	0	0	0	0	0	0	0	-1	-1	-1	0	0	-0.75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
17 Passaic	-0.75	0	0	0	0	0	0	0	0	0	0	0	-1.5	-1.5	-1.5	0	0	0	-0.75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
18 Hudson	0.5	0	0	0	0	0	0	0	0	0	0	0	-1.5	-1.5	-1.5	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
19 Essex	-0.75	0	0	0	0	0	0	0	0	0	0	0	-1.5	-1.5	-1.5	0	0	0	0	0	-0.75	0	0	0	0	0	0	0	0	0	0	0	0	0	
20 Union	-0.75	0	0	0	0	0	0	0	0	0	0	0	-1.5	-1.5	-1.5	0	0	0	0	0	0	-0.75	0	0	0	0	0	0	0	0	0	0	0	0	
21 Morris	-0.75	0	0	0	0	0	0	0	0	0	0	0	-1.5	-1.5	-1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
22 Somerset	-0.75	0	0	0	0	0	0	0	0	0	0	0	-1.5	-1.5	-1.5	0	0	0	0	0	0	0	0	0	-0.75	0	0	0	0	0	0	0	0	0	
23 Middlesex	-0.75	0	0	0	0	0	0	0	0	0	0	0	-1.5	-1.5	-1.5	0	0	0	0	0	0	0	0	0	0	-0.75	0	0	0	0	0	0	0	0	
24 Monmouth	0	0	0	0	0	0	0	0	0	0	0	0	-1.5	-1.5	-1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
25 Ocean	0	0	0	0	0	0	0	0	0	0	0	0	-1.5	-1.5	-1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
26 Hunterdon	-0.75	0	0	0	0	0	0	0	0	0	0	0	-1.5	-1.5	-1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-0.75	0	0	0	0
27 Warren	-0.75	0	0	0	0	0	0	0	0	0	0	0	-1.5	-1.5	-1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-0.75	0	0	0
28 Sussex	-0.75	0	0	0	0	0	0	0	0	0	0	0	-1.5	-1.5	-1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-0.75	0	0
29 New Haven	0	0	0	0	0	0	0	0	0	0	0	0	0	-0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30 Mercer	-0.75	0	0	0	0	0	0	0	0	0	0	0	-1.5	-1.5	-1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-0.75

Mode Share Adjustments

Mode Specific Adjustment Factors: Adjustments to the Mode choice component of the Destination-Mode Choice (DMC) model can be made in order to better match model and observed mode shares. In concept these mode share adjustment factors are straight-forward, constituting an additional element in the bias constant for different modes, applied on top of the utilities during the mode choice probability calculations. For the BPM, these can be flexibly structured as origin-destination based stratifications of the modal bias factors, also termed alternative specific constants. The implementation of the mode share adjustment factors in the BPM is flexible in terms of the geographic segmentation applied. As describe below, the origin-destination based corridors for mode choice calibration are set by "Index" files created in the calibration step, which define the specific geography to be applied.

Observed Target Shares: For the original Base Year 1996 BPM calibration, the "observed" or "target" mode shares were developed primarily from the RT-HIS survey data, with appropriate weights applied in the tabulations of mode shares by tour-purpose/ For work travel, the development of these calibration target shares also made use of the Census Journey-to-Work data (1990). Based on comparison of model and established target shares in it was decided that the BPM should be structured to allow for the adjustment of mode shares for particular corridors, since both origin and destination is known at this modeling stage. However, the modelers and the advisory committee did not endorse the idea that every specific origin and destination district should have unique mode share adjustment factors, nor could observed shares at this level generally be known.

Instead, origins and destinations were grouped into meaningful travel corridors, such as Manhattan to Long Island counties or Long Island counties to Queens and Brooklyn for the purposes of refining the mode share estimates of the BPM. It is important to note that while the adjustment factors can be identical for both directions, there was no requirement that they be identical. In fact, any travel movement that involves Manhattan is almost certainly not symmetrical, since the mode share for inbound Manhattan can be very different from outbound in any period of the day.

For the BPM 2002 Update, Hub-Bound 2002 transit count data and the RT-HIS survey data, re-weighted and expanded with Census 2000 data (See Section 2.3) served as the source for the mode share calibration targets.

Auto-Calibration: As documented in the BPM General Final Report, in the original Base Year 1996 calibration of the BPM, the data of observed mode shares taken from the RT-HIS and Census were used to construct mode share target files these mode share targets files are not used directly in the model application, but are used (for both for motorized and non-motorized) as part of the auto-calibration feature that is incorporated in the BPM application system. It should be noted that auto-calibration is done only during calibration of the model, and is not used during normal model forecasting runs.

For the BPM 2002 Update, the auto-calibration procedures were not used. Instead, all previously calculated mode-specific constants from the 1996 calibration were removed, and in a series of test calibration runs, modest changes and were manually made based on analysis of the results of each run with respect to the Hub-Bound 2002 transit count data and the RT-HIS survey data, re-weighted and expanded with Census 2000 data (See Section 2.3).

Index Files for Origin-Destination Corridors: Indices must be developed to indicate to the BPM how to group certain origins (or pairs of origins and destinations) for the purpose of estimating the mode share factors (in auto-calibration), or for applying them in a standard BPM run.

Non-Motorized: The determination whether a tour is made by a non-motorized mode occurs prior to destination choice, so only the origin is known. Thus, these adjustments occur on a one-dimensional array (based on origin), rather than the more complicated two-dimensional adjustments (origin and destination) needed for the motorized modes.

For the current Base Year 2002 calibration of the BPM, the index for non-motorized travel is the same across all purposes, and is reproduced below in **Table B-6**. All Manhattan districts, with the exception of upper Manhattan have been grouped together (since they have by far the highest non-motorized share). Upper Manhattan is a special case where the non-motorized share is often lower than for the outer boroughs, so grouping it with the rest of Manhattan is inappropriate. Brooklyn, Queens and the Bronx were coded as 3 (other New York City), while Staten Island was actually grouped with other New York counties to create the "Suburban NY" grouping. Other groupings include "Rural NY," "Urban NJ" and "Suburban/Rural NJ." The two Connecticut counties were grouped in the "Urban NY" grouping.

While the groupings are unchanged by purpose, the observed non-motorized share can be quite different by purpose. Medium and high income work purposes generally have the lowest non-motorized share (3-4% regionwide), while at work has by far the highest regionwide non-motorized share (nearly 40%), followed by school (21%) discretionary travel (17%) and maintenance (15%). Within each purpose, the shares will vary widely by origin. For example, for low income work purposes, urban NJ has a much higher non-motorized share (almost 25%) than Manhattan (10%). The highest non-motorized share to be found is Manhattan-based at work tours, where the share is over 75%. The lowest is under 1% non-motorized for high income work tours originating in rural parts of the region.

In **Table B-7** and **Table B-8**, the target values developed from the survey and the final non-motorized adjustment factors are shown for Purpose 2 – Work Tours / Medium Income, respectively

Table B6 - Non-motorized Pre-Mode Choice Mode Specific Constant Indices

District	Name	Index
0	Lower Man	1
1	Valley Man	1
2	Midtown Man	1
3	Upper Man	2
4	Queens	3
5	Bronx	3
6	Kings	3
7	Richmond	4
8	Nassau	4
9	Suffolk	4
10	Westchester	4
11	Rockland	4
12	Putnam	5
13	Orange	5
14	Dutchess	5
15	Fairfield	4
16	Bergen	6
17	Passaic	6
18	Hudson	7
19	Essex	7
20	Union	7
21	Morris	6
22	Somerset	6
23	Middlesex	6
24	Monmouth	6
25	Ocean	6
26	Hunterdon	6
27	Warren	6
28	Sussex	6
29	New Haven	4
30	Mercer	6

Table B-7 - Purpose 2 – Work / Medium Income – Non-Motorized Targets

INDEX	DESCRIPTION	Non-Motorized
	Regional Shares	5
1	From Manhattan	10.8
2	From Upper Manhattan	4.9
3	From NYC	8.3
4	From Sub NY	2
5	From Rural NY	1.9
6	From Sub/Rural NJ	2.6
7	From Urban NJ	7.4

Table B-8: Purpose 2 – Work / Medium Income – Adjustment factors

INDEX	DESCRIPTION	Non-Motorized
1	From Lower Manhattan	-1.29386
2	From Valley Manhattan	-1.69978
3	From Midtown Manhattan	-0.19615
4	From Other Manhattan	-0.10813
5	From Urban Non-Manhattan	-0.33376
6	From Suburbs	0.17083
7	From Rural	0.37975

Motorized Tours: The situation is more complicated for the motorized modes. Here the indices are developed to indicate to the program how to group pairs of origins and destinations, and these vary by purpose. As an example, in **Table B-9.2** for Purpose 2: Work / Medium Income, – District Pair Indexing, it can be seen that all origins in Manhattan and all destinations in Manhattan are given the code of 1. Origins in Manhattan and destinations in Queens, Brooklyn or the Bronx have a code of 2, while the reverse movement has a code of 8. These are the numbers that are used to index or look-up the mode share target or the mode share adjustment factor for this purpose.

An important characteristic of the mode specific adjustment constants is that if there is a zero value in the observed data, then the adjustment factor should be -99999 to prevent that mode from being chosen, indicating to the mode choice model that this mode is not-available. Certain modes should be made available, however, even if they do not appear in the survey data. One of these modes is HOV2, which must be available for all origins and destinations. Walk to transit is generally available for all district pairings and all purposes, though there are a few unique combinations where walk to transit is prohibited. Of course, school bus is only allowed as the mode for school tours, so for all others, the adjustment factors will be -99999. Due to its irrelevance, for all purposes other than school, the school bus column in each adjustment factor table has been dropped in the **Tables B-10**, although these columns must exist in the actual files used by BPM.

APPENDIX B: Table B-9- 1

BPM Base Year Re-Calibration: Stage 3 / RC-BPM-55G

Origin-Destination Based Indices for Mode Specific Constants - Purpose 1: Work / Low Income

		Destination District																														
Origin District		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
0	Lower Man	1	1	1	1	2	2	2	3	4	4	5	5	5	5	5	5	6	6	7	7	7	6	6	6	6	6	6	6	5	6	
1	Valley Man	1	1	1	1	2	2	2	3	4	4	5	5	5	5	5	5	6	6	7	7	7	6	6	6	6	6	6	6	5	6	
2	Midtown Man	1	1	1	1	2	2	2	3	4	4	5	5	5	5	5	5	6	6	7	7	7	6	6	6	6	6	6	6	5	6	
3	Upper Man	1	1	1	1	2	2	2	3	4	4	5	5	5	5	5	5	6	6	7	7	7	6	6	6	6	6	6	6	5	6	
4	Queens	8	8	8	8	20	20	20	21	23	23	23	23	23	23	23	24	25	25	26	26	26	25	25	25	25	25	25	25	24	25	
5	Bronx	8	8	8	8	20	20	20	21	23	23	23	23	23	23	23	24	25	25	26	26	26	25	25	25	25	25	25	25	24	25	
6	Kings	8	8	8	8	20	20	20	21	23	23	23	23	23	23	23	24	25	25	26	26	26	25	25	25	25	25	25	25	24	25	
7	Richmond	10	10	10	10	21	21	21	22	23	23	30	30	30	30	30	27	27	28	28	28	28	27	27	27	27	27	27	30	27		
8	Nassau	11	11	11	11	23	23	23	23	29	29	28	28	28	28	28	30	30	31	31	31	31	30	30	30	30	30	30	30	28	30	
9	Suffolk	11	11	11	11	23	23	23	23	29	29	28	28	28	28	28	30	30	31	31	31	31	30	30	30	30	30	30	30	28	30	
10	Westchester	12	12	12	12	23	23	23	30	28	28	32	32	32	32	32	33	34	34	30	30	30	34	35	35	35	35	35	34	33	35	
11	Rockland	13	13	13	13	23	23	23	30	28	28	32	32	32	32	32	33	34	34	30	30	30	34	35	35	35	35	35	34	33	35	
12	Putnam	14	14	14	14	23	23	23	30	28	28	32	32	32	32	32	33	34	34	30	30	30	34	35	35	35	35	35	34	33	35	
13	Orange	13	13	13	13	23	23	23	30	28	28	32	32	32	32	32	33	34	34	30	30	30	34	35	35	35	35	35	34	33	35	
14	Dutchess	14	14	14	14	23	23	23	30	28	28	32	32	32	32	32	33	34	34	30	30	30	34	35	35	35	35	35	34	33	35	
15	Fairfield	15	15	15	15	25	25	25	30	28	28	33	33	33	33	33	32	30	30	30	30	30	30	30	30	30	30	30	30	32	30	
16	Bergen	16	16	16	16	25	25	25	27	30	30	34	34	34	34	34	30	36	36	37	37	37	36	38	38	38	38	36	36	30	38	
17	Passaic	16	16	16	16	25	25	25	27	30	30	34	34	34	34	34	30	36	36	37	37	37	36	38	38	38	38	36	36	30	38	
18	Hudson	17	17	17	17	26	26	26	28	31	31	30	30	30	30	30	37	37	32	32	32	37	35	35	35	35	35	37	37	30	35	
19	Essex	17	17	17	17	26	26	26	28	31	31	30	30	30	30	30	37	37	32	32	32	37	35	35	35	35	35	37	37	30	35	
20	Union	17	17	17	17	26	26	26	28	31	31	30	30	30	30	30	37	37	32	32	32	37	35	35	35	35	35	37	37	30	35	
21	Morris	16	16	16	16	25	25	25	27	30	30	34	34	34	34	34	30	36	36	37	37	37	36	38	38	38	38	36	36	30	38	
22	Somerset	18	18	18	18	25	25	25	27	30	30	35	35	35	35	35	30	38	38	35	35	35	38	36	36	36	36	36	38	38	30	36
23	Middlesex	18	18	18	18	25	25	25	27	30	30	35	35	35	35	35	30	38	38	35	35	35	38	36	36	36	36	36	38	38	30	36
24	Monmouth	19	19	19	19	25	25	25	27	30	30	35	35	35	35	35	30	38	38	35	35	35	38	36	36	36	36	36	38	38	30	36
25	Ocean	19	19	19	19	25	25	25	27	30	30	35	35	35	35	35	30	38	38	35	35	35	38	36	36	36	36	36	38	38	30	36
26	Hunterdon	18	18	18	18	25	25	25	27	30	30	35	35	35	35	35	30	38	38	35	35	35	38	36	36	36	36	36	38	38	30	36
27	Warren	16	16	16	16	25	25	25	27	30	30	35	35	35	35	35	30	36	36	37	37	37	36	38	38	38	38	36	36	30	38	
28	Sussex	16	16	16	16	25	25	25	27	30	30	34	34	34	34	34	30	36	36	37	37	37	36	38	38	38	38	36	36	30	38	
29	New Haven	15	15	15	15	24	24	24	30	28	28	33	33	33	33	33	32	30	30	30	30	30	30	30	30	30	30	30	32	30		
30	Mercer	18	18	18	18	25	25	25	27	30	30	35	35	35	35	35	30	38	38	35	35	35	38	36	36	36	36	36	38	38	30	36

APPENDIX B: Table B-9- 2

BPM Base Year Re-Calibration: Stage 3 / RC-BPM-55G

Origin-Destination Based Indices for Mode Specific Constants - Purpose 2: Work / Medium Income

		Destination District																													
Origin District		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
0	Lower Man	1	1	1	1	2	2	2	3	4	4	5	5	5	5	5	6	6	7	7	7	6	6	6	6	6	6	6	6	5	6
1	Valley Man	1	1	1	1	2	2	2	3	4	4	5	5	5	5	5	6	6	7	7	7	6	6	6	6	6	6	6	6	5	6
2	Midtown Man	1	1	1	1	2	2	2	3	4	4	5	5	5	5	5	6	6	7	7	7	6	6	6	6	6	6	6	6	5	6
3	Upper Man	1	1	1	1	2	2	2	3	4	4	5	5	5	5	5	6	6	7	7	7	6	6	6	6	6	6	6	6	5	6
4	Queens	8	8	8	11	25	25	25	26	27	27	28	28	28	28	29	30	30	31	31	31	30	30	30	30	30	30	30	29	30	
5	Bronx	43	43	43	12	25	25	25	26	27	27	28	28	28	28	29	30	30	31	31	31	30	30	30	30	30	30	30	29	30	
6	Kings	8	8	8	11	25	25	25	26	27	27	28	28	28	28	29	30	30	31	31	31	30	30	30	30	30	30	30	29	30	
7	Richmond	13	13	13	14	26	26	26	26	27	27	28	28	28	28	29	32	32	32	32	32	32	32	32	32	32	32	32	29	32	
8	Nassau	15	15	15	16	27	27	27	27	33	33	34	34	34	34	34	35	35	27	27	27	35	35	35	35	35	35	35	34	35	
9	Suffolk	15	15	15	16	27	27	27	27	33	33	34	34	34	34	34	35	35	27	27	27	35	35	35	35	35	35	35	34	35	
10	Westchester	17	17	17	17	28	28	28	28	34	34	34	34	34	34	36	36	36	40	40	40	36	36	36	36	36	36	36	36	36	
11	Rockland	18	18	18	18	28	28	28	28	34	34	34	34	34	34	36	36	36	40	40	40	36	36	36	36	36	36	36	36	36	
12	Putnam	19	19	19	19	28	28	28	28	34	34	34	34	34	34	36	36	36	40	40	40	36	36	36	36	36	36	36	36	36	
13	Orange	18	18	18	18	28	28	28	28	34	34	34	34	34	34	36	36	36	40	40	40	36	36	36	36	36	36	36	36	36	
14	Dutchess	19	19	19	19	28	28	28	28	34	34	34	34	34	34	36	36	36	40	40	40	36	36	36	36	36	36	36	36	36	
15	Fairfield	20	20	20	20	29	29	29	29	34	34	36	36	36	36	37	38	38	38	38	38	38	39	39	39	39	39	39	38	39	
16	Bergen	18	18	18	21	30	30	30	32	35	35	36	36	36	36	36	38	40	40	40	40	40	40	38	38	38	38	40	40	38	
17	Passaic	18	18	18	21	30	30	30	32	35	35	36	36	36	36	38	40	40	40	40	40	40	38	38	38	38	38	40	40	38	
18	Hudson	22	22	22	23	31	31	31	32	27	27	40	40	40	40	38	40	40	41	41	41	40	40	40	40	40	40	40	40	40	
19	Essex	22	22	22	23	31	31	31	32	27	27	40	40	40	40	38	40	40	41	41	41	40	40	40	40	40	40	40	40	40	
20	Union	22	22	22	23	31	31	31	32	27	27	40	40	40	40	38	40	40	41	41	41	40	40	40	40	40	40	40	40	40	
21	Morris	18	18	18	21	30	30	30	32	35	35	36	36	36	36	38	40	40	40	40	40	40	38	38	38	38	38	40	40	38	
22	Somerset	24	24	24	24	30	30	30	32	35	35	36	36	36	36	39	38	38	40	40	40	38	42	42	42	42	42	38	38	39	42
23	Middlesex	24	24	24	24	30	30	30	32	35	35	36	36	36	36	39	38	38	40	40	40	38	42	42	42	42	42	38	38	39	42
24	Monmouth	18	18	18	21	30	30	30	32	35	35	36	36	36	36	39	38	38	40	40	40	38	42	42	42	42	42	38	38	39	42
25	Ocean	18	18	18	21	30	30	30	32	35	35	36	36	36	36	39	38	38	40	40	40	38	42	42	42	42	42	38	38	39	42
26	Hunterdon	24	24	24	24	30	30	30	32	35	35	36	36	36	36	39	38	38	40	40	40	38	42	42	42	42	42	38	38	39	42
27	Warren	18	18	18	21	30	30	30	32	35	35	36	36	36	36	39	40	40	40	40	40	40	38	38	38	38	38	40	40	39	38
28	Sussex	18	18	18	21	30	30	30	32	35	35	36	36	36	36	38	40	40	40	40	40	40	38	38	38	38	38	40	40	38	38
29	New Haven	20	20	20	20	29	29	29	29	34	34	36	36	36	36	37	38	38	38	38	38	38	39	39	39	39	39	39	38	37	39
30	Mercer	24	24	24	24	30	30	30	32	35	35	36	36	36	36	39	38	38	40	40	40	38	42	42	42	42	42	38	38	39	42

APPENDIX B: Table B-9- 3

BPM Base Year Re-Calibration: Stage 3 / RC-BPM-55G

Origin-Destination Based Indices for Mode Specific Constants - Purpose 3: Work / High Income

		Destination District																													
Origin District		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
0	Lower Man	1	1	1	1	2	2	2	3	5	5	5	5	5	5	5	6	6	7	7	7	6	6	6	6	6	6	6	6	5	6
1	Valley Man	1	1	1	1	2	2	2	3	5	5	5	5	5	5	5	6	6	7	7	7	6	6	6	6	6	6	6	6	5	6
2	Midtown Man	1	1	1	1	2	2	2	3	5	5	5	5	5	5	5	6	6	7	7	7	6	6	6	6	6	6	6	6	5	6
3	Upper Man	1	1	1	1	2	2	2	3	5	5	5	5	5	5	5	6	6	7	7	7	6	6	6	6	6	6	6	6	5	6
4	Queens	8	8	8	8	28	28	28	29	31	31	31	31	31	31	32	33	33	34	34	34	33	33	33	33	33	33	33	32	33	
5	Bronx	44	44	44	10	28	28	28	29	31	31	31	31	31	31	32	33	33	34	34	34	33	33	33	33	33	33	33	32	33	
6	Kings	8	8	8	8	28	28	28	29	31	31	31	31	31	31	32	33	33	34	34	34	33	33	33	33	33	33	33	32	33	
7	Richmond	11	11	11	12	29	29	29	30	35	35	36	36	36	36	36	36	36	37	37	37	36	36	36	36	36	36	36	36	36	
8	Nassau	13	13	13	13	31	31	31	35	35	35	38	38	38	38	38	39	39	40	40	40	39	39	39	39	39	39	39	38	39	
9	Suffolk	13	13	13	13	31	31	31	35	35	35	38	38	38	38	38	39	39	40	40	40	39	39	39	39	39	39	39	38	39	
10	Westchester	14	14	14	15	31	31	31	36	38	38	41	41	41	41	41	35	35	35	42	42	42	35	35	35	35	35	35	35	35	
11	Rockland	16	16	16	17	31	31	31	36	38	38	41	41	41	41	41	35	35	35	42	42	42	35	35	35	35	35	35	35	35	
12	Putnam	18	18	18	18	31	31	31	36	38	38	41	41	41	41	41	35	35	35	42	42	42	35	35	35	35	35	35	35	35	
13	Orange	16	16	16	17	31	31	31	36	38	38	41	41	41	41	41	35	35	35	42	42	42	35	35	35	35	35	35	35	35	
14	Dutchess	18	18	18	18	31	31	31	36	38	38	41	41	41	41	41	35	35	35	42	42	42	35	35	35	35	35	35	35	35	
15	Fairfield	19	19	19	20	33	33	33	36	38	38	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	
16	Bergen	21	21	21	22	33	33	33	36	39	39	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	
17	Passaic	21	21	21	22	33	33	33	36	39	39	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	
18	Hudson	23	23	23	24	34	34	34	37	40	40	42	42	42	42	42	35	35	35	43	43	43	35	35	35	35	35	35	35	35	
19	Essex	23	23	23	24	34	34	34	37	40	40	42	42	42	42	42	35	35	35	43	43	43	35	35	35	35	35	35	35	35	
20	Union	23	23	23	24	34	34	34	37	40	40	42	42	42	42	42	35	35	35	43	43	43	35	35	35	35	35	35	35	35	
21	Morris	21	21	21	22	33	33	33	36	39	39	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	
22	Somerset	25	25	25	26	33	33	33	36	39	39	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	
23	Middlesex	25	25	25	26	33	33	33	36	39	39	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	
24	Monmouth	27	27	27	27	33	33	33	36	39	39	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	
25	Ocean	27	27	27	27	33	33	33	36	39	39	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	
26	Hunterdon	25	25	25	26	33	33	33	36	39	39	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	
27	Warren	21	21	21	22	33	33	33	36	39	39	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	
28	Sussex	21	21	21	22	33	33	33	36	39	39	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	
29	New Haven	19	19	19	20	32	32	32	36	38	38	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	
30	Mercer	25	25	25	26	33	33	33	36	39	39	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	

APPENDIX B: Table B-9- 4

BPM Base Year Re-Calibration: Stage 3 / RC-BPM-55G

Origin-Destination Based Indices for Mode Specific Constants - Purpose 4: School

		Destination District																													
Origin District		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
0	Lower Man	1	1	1	1	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
1	Valley Man	1	1	1	1	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
2	Midtown Man	1	1	1	1	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
3	Upper Man	1	1	1	1	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
4	Queens	4	4	4	4	6	9	9	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	
5	Bronx	4	4	4	4	9	6	9	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	
6	Kings	4	4	4	4	9	9	6	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	
7	Richmond	4	4	4	4	10	10	10	7	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	
8	Nassau	5	5	5	5	10	10	10	10	7	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	
9	Suffolk	5	5	5	5	10	10	10	10	10	7	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	
10	Westchester	5	5	5	5	10	10	10	10	10	10	7	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	
11	Rockland	5	5	5	5	10	10	10	10	10	10	7	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	
12	Putnam	5	5	5	5	10	10	10	10	10	10	10	8	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	
13	Orange	5	5	5	5	10	10	10	10	10	10	10	10	8	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	
14	Dutchess	5	5	5	5	10	10	10	10	10	10	10	10	10	8	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	
15	Fairfield	5	5	5	5	10	10	10	10	10	10	10	10	10	7	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	
16	Bergen	5	5	5	5	10	10	10	10	10	10	10	10	10	10	7	10	10	10	10	10	10	10	10	10	10	10	10	10	10	
17	Passaic	5	5	5	5	10	10	10	10	10	10	10	10	10	10	10	8	10	10	10	10	10	10	10	10	10	10	10	10	10	
18	Hudson	5	5	5	5	10	10	10	10	10	10	10	10	10	10	10	10	10	7	10	10	10	10	10	10	10	10	10	10	10	
19	Essex	5	5	5	5	10	10	10	10	10	10	10	10	10	10	10	10	10	10	7	10	10	10	10	10	10	10	10	10	10	
20	Union	5	5	5	5	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	7	10	10	10	10	10	10	10	10	10	
21	Morris	5	5	5	5	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	7	10	10	10	10	10	10	10	10	
22	Somerset	5	5	5	5	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	8	10	10	10	10	10	10	10	10	
23	Middlesex	5	5	5	5	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	8	10	10	10	10	10	10	10	
24	Monmouth	5	5	5	5	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	8	10	10	10	10	10	10	
25	Ocean	5	5	5	5	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	8	10	10	10	10	10	
26	Hunterdon	5	5	5	5	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	8	10	10	10	10	
27	Warren	5	5	5	5	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	8	10	10	10	
28	Sussex	5	5	5	5	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	7	10	10	
29	New Haven	5	5	5	5	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	7	10	
30	Mercer	5	5	5	5	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	7	

APPENDIX B: Table B-9- 5

BPM Base Year Re-Calibration: Stage 3 / RC-BPM-55G

Origin-Destination Based Indices for Mode Specific Constants - Purpose 5: University

		Destination District																													
Origin District		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
0	Lower Man	1	1	1	1	2	2	2	2	3	3	5	5	5	5	5	6	6	4	4	4	6	6	6	6	6	6	6	6	5	6
1	Valley Man	1	1	1	1	2	2	2	2	3	3	5	5	5	5	5	6	6	4	4	4	6	6	6	6	6	6	6	6	5	6
2	Midtown Man	1	1	1	1	2	2	2	2	3	3	5	5	5	5	5	6	6	4	4	4	6	6	6	6	6	6	6	6	5	6
3	Upper Man	1	1	1	1	2	2	2	2	3	3	5	5	5	5	5	6	6	4	4	4	6	6	6	6	6	6	6	6	5	6
4	Queens	2	2	2	2	12	12	12	12	13	13	14	14	14	14	14	15	15	16	16	16	15	15	15	15	15	15	15	15	14	15
5	Bronx	2	2	2	2	12	12	12	12	13	13	14	14	14	14	14	15	15	16	16	16	15	15	15	15	15	15	15	15	14	15
6	Kings	2	2	2	2	12	12	12	12	13	13	14	14	14	14	14	15	15	16	16	16	15	15	15	15	15	15	15	15	14	15
7	Richmond	2	2	2	2	12	12	12	12	13	13	14	14	14	14	14	15	15	16	16	16	15	15	15	15	15	15	15	15	14	15
8	Nassau	3	3	3	3	13	13	13	13	17	17	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16
9	Suffolk	3	3	3	3	13	13	13	13	17	17	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16
10	Westchester	5	5	5	5	14	14	14	14	16	16	21	21	21	21	21	23	23	23	23	23	23	23	23	23	23	23	23	23	16	23
11	Rockland	5	5	5	5	14	14	14	14	16	16	21	21	21	21	21	23	23	23	23	23	23	23	23	23	23	23	23	23	16	23
12	Putnam	5	5	5	5	14	14	14	14	16	16	21	21	21	21	21	23	23	23	23	23	23	23	23	23	23	23	23	23	16	23
13	Orange	5	5	5	5	14	14	14	14	16	16	21	21	21	21	21	23	23	23	23	23	23	23	23	23	23	23	23	23	16	23
14	Dutchess	5	5	5	5	14	14	14	14	16	16	21	21	21	21	21	23	23	23	23	23	23	23	23	23	23	23	23	23	16	23
15	Fairfield	5	5	5	5	14	14	14	14	16	16	16	16	16	16	25	16	16	16	16	16	16	16	16	16	16	16	16	16	25	16
16	Bergen	10	10	10	10	15	15	15	15	16	16	23	23	23	23	23	16	28	28	29	29	29	28	28	28	28	28	28	28	16	28
17	Passaic	10	10	10	10	15	15	15	15	16	16	23	23	23	23	23	16	28	28	29	29	29	28	28	28	28	28	28	28	16	28
18	Hudson	11	11	11	11	16	16	16	16	16	16	23	23	23	23	23	16	29	29	30	30	30	29	29	29	29	29	29	29	16	29
19	Essex	11	11	11	11	16	16	16	16	16	16	23	23	23	23	23	16	29	29	30	30	30	29	29	29	29	29	29	29	16	29
20	Union	11	11	11	11	16	16	16	16	16	16	23	23	23	23	23	16	29	29	30	30	30	29	29	29	29	29	29	29	16	29
21	Morris	10	10	10	10	15	15	15	15	16	16	23	23	23	23	23	16	28	28	29	29	29	28	28	28	28	28	28	16	28	
22	Somerset	10	10	10	10	15	15	15	15	16	16	23	23	23	23	23	16	28	28	29	29	29	28	28	28	28	28	28	16	28	
23	Middlesex	10	10	10	10	15	15	15	15	16	16	23	23	23	23	23	16	28	28	29	29	29	28	28	28	28	28	28	16	28	
24	Monmouth	10	10	10	10	15	15	15	15	16	16	23	23	23	23	23	16	28	28	29	29	29	28	28	28	28	28	28	16	28	
25	Ocean	10	10	10	10	15	15	15	15	16	16	23	23	23	23	23	16	28	28	29	29	29	28	28	28	28	28	28	16	28	
26	Hunterdon	10	10	10	10	15	15	15	15	16	16	23	23	23	23	23	16	28	28	29	29	29	28	28	28	28	28	28	16	28	
27	Warren	10	10	10	10	15	15	15	15	16	16	23	23	23	23	23	16	28	28	29	29	29	28	28	28	28	28	28	16	28	
28	Sussex	10	10	10	10	15	15	15	15	16	16	23	23	23	23	23	16	28	28	29	29	29	28	28	28	28	28	28	16	28	
29	New Haven	5	5	5	5	14	14	14	14	16	16	16	16	16	16	25	16	16	16	16	16	16	16	16	16	16	16	16	25	16	
30	Mercer	10	10	10	10	15	15	15	15	16	16	23	23	23	23	23	16	28	28	29	29	29	28	28	28	28	28	28	16	28	

APPENDIX B: Table B-9- 6

BPM Base Year Re-Calibration: Stage 3 / RC-BPM-55G

Origin-Destination Based Indices for Mode Specific Constants - Purpose 6: Maintenance

		Destination District																													
Origin District		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
0	Lower Man	1	1	1	1	2	2	2	2	3	3	5	5	5	5	5	6	6	4	4	4	6	6	6	6	6	6	6	6	5	6
1	Valley Man	1	1	1	1	2	2	2	2	3	3	5	5	5	5	5	6	6	4	4	4	6	6	6	6	6	6	6	6	5	6
2	Midtown Man	1	1	1	1	2	2	2	2	3	3	5	5	5	5	5	6	6	4	4	4	6	6	6	6	6	6	6	6	5	6
3	Upper Man	1	1	1	1	2	2	2	2	3	3	5	5	5	5	5	6	6	4	4	4	6	6	6	6	6	6	6	6	5	6
4	Queens	2	2	2	32	12	12	12	12	13	13	14	14	14	14	14	15	15	15	15	15	15	15	15	15	15	15	15	15	14	15
5	Bronx	2	2	2	32	12	12	12	12	13	13	14	14	14	14	14	15	15	15	15	15	15	15	15	15	15	15	15	15	14	15
6	Kings	2	2	2	32	12	12	12	12	13	13	14	14	14	14	14	15	15	15	15	15	15	15	15	15	15	15	15	15	14	15
7	Richmond	31	31	31	31	12	12	12	12	13	13	14	14	14	14	14	15	15	15	15	15	15	15	15	15	15	15	15	15	14	15
8	Nassau	8	8	8	8	13	13	13	13	17	17	18	18	18	18	18	19	19	18	18	18	19	19	19	19	19	19	19	19	18	19
9	Suffolk	8	8	8	8	13	13	13	13	17	17	18	18	18	18	18	19	19	18	18	18	19	19	19	19	19	19	19	19	18	19
10	Westchester	9	9	9	35	14	14	14	14	18	18	21	21	21	21	22	21	21	21	21	21	21	21	21	21	21	21	21	22	21	
11	Rockland	9	9	9	35	14	14	14	14	18	18	21	21	21	21	22	21	21	21	21	21	21	21	21	21	21	21	21	22	21	
12	Putnam	9	9	9	35	14	14	14	14	18	18	21	21	21	21	22	21	21	21	21	21	21	21	21	21	21	21	21	22	21	
13	Orange	9	9	9	35	14	14	14	14	18	18	21	21	21	21	22	21	21	21	21	21	21	21	21	21	21	21	21	22	21	
14	Dutchess	9	9	9	35	14	14	14	14	18	18	21	21	21	21	22	21	21	21	21	21	21	21	21	21	21	21	21	22	21	
15	Fairfield	9	9	9	35	14	14	14	14	18	18	22	22	22	22	21	26	26	27	27	27	26	26	26	26	26	26	26	21	26	
16	Bergen	10	10	10	36	15	15	15	15	19	19	21	21	21	21	26	21	21	21	21	21	21	21	21	21	21	21	21	26	21	
17	Passaic	10	10	10	36	15	15	15	15	19	19	21	21	21	21	26	21	21	21	21	21	21	21	21	21	21	21	21	26	21	
18	Hudson	11	11	11	37	15	15	15	15	18	18	21	21	21	21	27	21	21	30	30	30	21	21	21	21	21	21	21	27	21	
19	Essex	11	11	11	37	15	15	15	15	18	18	21	21	21	21	27	21	21	30	30	30	21	21	21	21	21	21	21	27	21	
20	Union	11	11	11	37	15	15	15	15	18	18	21	21	21	21	27	21	21	30	30	30	21	21	21	21	21	21	21	27	21	
21	Morris	10	10	10	36	15	15	15	15	19	19	21	21	21	21	26	21	21	21	21	21	21	21	21	21	21	21	21	26	21	
22	Somerset	10	10	10	36	15	15	15	15	19	19	21	21	21	21	26	21	21	21	21	21	21	21	21	21	21	21	21	26	21	
23	Middlesex	10	10	10	36	15	15	15	15	19	19	21	21	21	21	26	21	21	21	21	21	21	21	21	21	21	21	21	26	21	
24	Monmouth	10	10	10	36	15	15	15	15	19	19	21	21	21	21	26	21	21	21	21	21	21	21	21	21	21	21	21	26	21	
25	Ocean	10	10	10	36	15	15	15	15	19	19	21	21	21	21	26	21	21	21	21	21	21	21	21	21	21	21	21	26	21	
26	Hunterdon	10	10	10	36	15	15	15	15	19	19	21	21	21	21	26	21	21	21	21	21	21	21	21	21	21	21	21	26	21	
27	Warren	10	10	10	36	15	15	15	15	19	19	21	21	21	21	26	21	21	21	21	21	21	21	21	21	21	21	21	26	21	
28	Sussex	10	10	10	36	15	15	15	15	19	19	21	21	21	21	26	21	21	21	21	21	21	21	21	21	21	21	21	26	21	
29	New Haven	9	9	9	35	14	14	14	14	18	18	22	22	22	22	22	21	26	26	27	27	27	26	26	26	26	26	21	26		
30	Mercer	10	10	10	36	15	15	15	15	19	19	21	21	21	21	26	21	21	21	21	21	21	21	21	21	21	21	21	26	21	

APPENDIX B: Table B-9- 7

BPM Base Year Re-Calibration: Stage 3 / RC-BPM-55G

Origin-Destination Based Indices for Mode Specific Constants - Purpose 7: Discretionary

		Destination District																													
Origin District		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
0	Lower Man	1	1	1	1	2	2	2	2	3	3	5	5	5	5	5	6	6	4	4	4	6	6	6	6	6	6	6	6	5	6
1	Valley Man	1	1	1	1	2	2	2	2	3	3	5	5	5	5	5	6	6	4	4	4	6	6	6	6	6	6	6	6	5	6
2	Midtown Man	1	1	1	1	2	2	2	2	3	3	5	5	5	5	5	6	6	4	4	4	6	6	6	6	6	6	6	6	5	6
3	Upper Man	1	1	1	1	2	2	2	2	3	3	5	5	5	5	5	6	6	4	4	4	6	6	6	6	6	6	6	6	5	6
4	Queens	7	7	7	32	12	12	12	12	13	13	14	14	14	14	14	14	14	16	16	16	14	14	14	14	14	14	14	14	14	14
5	Bronx	7	7	7	32	12	12	12	12	13	13	14	14	14	14	14	14	14	16	16	16	14	14	14	14	14	14	14	14	14	14
6	Kings	7	7	7	32	12	12	12	12	13	13	14	14	14	14	14	14	14	16	16	16	14	14	14	14	14	14	14	14	14	14
7	Richmond	31	31	31	33	12	12	12	12	13	13	14	14	14	14	14	14	14	16	16	16	14	14	14	14	14	14	14	14	14	14
8	Nassau	8	8	8	8	13	13	13	13	17	17	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
9	Suffolk	8	8	8	8	13	13	13	13	17	17	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
10	Westchester	9	9	9	35	14	14	14	14	18	18	21	21	21	21	21	22	22	22	29	29	29	22	22	22	22	22	22	22	22	
11	Rockland	9	9	9	35	14	14	14	14	18	18	21	21	21	21	21	22	22	22	29	29	29	22	22	22	22	22	22	22	22	
12	Putnam	9	9	9	35	14	14	14	14	18	18	21	21	21	21	21	22	22	22	29	29	29	22	22	22	22	22	22	22	22	
13	Orange	9	9	9	35	14	14	14	14	18	18	21	21	21	21	21	22	22	22	29	29	29	22	22	22	22	22	22	22	22	
14	Dutchess	9	9	9	35	14	14	14	14	18	18	21	21	21	21	21	22	22	22	29	29	29	22	22	22	22	22	22	22	22	
15	Fairfield	9	9	9	35	14	14	14	14	18	18	22	22	22	22	22	25	18	18	18	18	18	18	18	18	18	18	18	18	25	18
16	Bergen	10	10	10	36	14	14	14	14	18	18	22	22	22	22	22	18	25	25	29	29	29	25	25	25	25	25	25	25	18	25
17	Passaic	10	10	10	36	14	14	14	14	18	18	22	22	22	22	22	18	25	25	29	29	29	25	25	25	25	25	25	25	18	25
18	Hudson	11	11	11	11	16	16	16	16	18	18	29	29	29	29	29	18	29	29	30	30	30	29	29	29	29	29	29	29	18	29
19	Essex	11	11	11	11	16	16	16	16	18	18	29	29	29	29	29	18	29	29	30	30	30	29	29	29	29	29	29	29	18	29
20	Union	11	11	11	11	16	16	16	16	18	18	29	29	29	29	29	18	29	29	30	30	30	29	29	29	29	29	29	29	18	29
21	Morris	10	10	10	36	14	14	14	14	18	18	22	22	22	22	22	18	25	25	29	29	29	25	25	25	25	25	25	25	18	25
22	Somerset	10	10	10	36	14	14	14	14	18	18	22	22	22	22	22	18	25	25	29	29	29	25	25	25	25	25	25	25	18	25
23	Middlesex	10	10	10	36	14	14	14	14	18	18	22	22	22	22	22	18	25	25	29	29	29	25	25	25	25	25	25	25	18	25
24	Monmouth	10	10	10	36	14	14	14	14	18	18	22	22	22	22	22	18	25	25	29	29	29	25	25	25	25	25	25	25	18	25
25	Ocean	10	10	10	36	14	14	14	14	18	18	22	22	22	22	22	18	25	25	29	29	29	25	25	25	25	25	25	25	18	25
26	Hunterdon	10	10	10	36	14	14	14	14	18	18	22	22	22	22	22	18	25	25	29	29	29	25	25	25	25	25	25	25	18	25
27	Warren	10	10	10	36	14	14	14	14	18	18	22	22	22	22	22	18	25	25	29	29	29	25	25	25	25	25	25	25	18	25
28	Sussex	10	10	10	36	14	14	14	14	18	18	22	22	22	22	22	18	25	25	29	29	29	25	25	25	25	25	25	25	18	25
29	New Haven	9	9	9	35	14	14	14	14	18	18	22	22	22	22	22	25	18	18	18	18	18	18	18	18	18	18	18	25	18	
30	Mercer	10	10	10	36	14	14	14	14	18	18	22	22	22	22	22	18	25	25	29	29	29	25	25	25	25	25	25	25	18	25

APPENDIX B: Table B-9- 8

BPM Base Year Re-Calibration: Stage 3 / RC-BPM-55G

Origin-Destination Based Indices for Mode Specific Constants - Purpose 8: At-Work

		Destination District																													
Origin District		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
0	Lower Man	1	1	1	1	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
1	Valley Man	1	1	1	1	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
2	Midtown Man	1	1	1	1	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
3	Upper Man	1	1	1	1	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
4	Queens	2	2	2	2	6	9	9	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	
5	Bronx	2	2	2	2	9	6	9	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	
6	Kings	2	2	2	2	9	9	6	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	
7	Richmond	2	2	2	2	8	8	8	7	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	
8	Nassau	5	5	5	10	8	8	8	8	7	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	
9	Suffolk	5	5	5	10	8	8	8	8	8	7	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	
10	Westchester	5	5	5	10	8	8	8	8	8	8	7	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	
11	Rockland	5	5	5	10	8	8	8	8	8	8	7	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	
12	Putnam	5	5	5	10	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	
13	Orange	5	5	5	10	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	
14	Dutchess	5	5	5	10	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	
15	Fairfield	5	5	5	10	8	8	8	8	8	8	8	8	8	8	7	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
16	Bergen	5	5	5	10	8	8	8	8	8	8	8	8	8	8	8	7	8	8	8	8	8	8	8	8	8	8	8	8	8	8
17	Passaic	5	5	5	10	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
18	Hudson	5	5	5	10	8	8	8	8	8	8	8	8	8	8	8	8	8	7	8	8	8	8	8	8	8	8	8	8	8	8
19	Essex	5	5	5	10	8	8	8	8	8	8	8	8	8	8	8	8	8	8	7	8	8	8	8	8	8	8	8	8	8	8
20	Union	5	5	5	10	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	7	8	8	8	8	8	8	8	8	8	8
21	Morris	5	5	5	10	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	7	8	8	8	8	8	8	8	8	8
22	Somerset	5	5	5	10	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
23	Middlesex	5	5	5	10	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
24	Monmouth	5	5	5	10	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
25	Ocean	5	5	5	10	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
26	Hunterdon	5	5	5	10	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
27	Warren	5	5	5	10	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
28	Sussex	5	5	5	10	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	7	8	8
29	New Haven	5	5	5	10	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	7	8
30	Mercer	5	5	5	10	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	7

APPENDIX B: Table B-10- 1
BPM Base Year Re-Calibration: Stage 3 / RC-BPM-55G
Mode Specific Constants - Purpose 1: Work / Low Income

index	description	da	sr2	sr3	sr4	wt	dt	wc	dc	tx	nm	sb
1	In Manhat	0	0	0	0	-0.994	-0.994	-0.244	-0.244	0	0	0
2	x2	0	0	0	0	-0.883	-0.883	-0.217	-0.217	0	0	0
3	x3	0	0	0	0	-1.325	-1.325	-0.325	-0.325	0	0	0
4	x4	0	0	0	0	-1.325	-1.325	-0.325	-0.325	0	0	0
5	x5	0	0	0	0	0.000	0.000	0.000	0.000	0	0	0
6	x6	0	0	0	0	-1.084	-1.084	-0.266	-0.266	0	0	0
7	x7	0	0	0	0	-1.325	-1.325	-0.325	-0.325	0	0	0
8	x8	0	0	0	0	-1.258	-1.258	-1.792	-1.792	0	0	0
10	x9	0	0	0	0	0.100	0.100	-2.200	-2.200	0	0	0
11	x10	0	0	0	0	0.100	0.100	-2.200	-2.200	0	0	0
12	x11	0	0	0	0	-3.975	-3.975	-0.975	-0.975	0	0	0
13	x12	0	0	0	0	-3.975	-3.975	-0.975	-0.975	0	0	0
14	x13	0	0	0	0	-3.975	-3.975	-0.975	-0.975	0	0	0
15	x14	0	0	0	0	-1.950	-1.950	-1.313	-1.313	0	0	0
16	x15	0	0	0	0	-0.090	-0.090	-1.800	-1.800	0	0	0
17	x16	0	0	0	0	-0.100	-0.100	-2.000	-2.000	0	0	0
18	x17	0	0	0	0	-0.100	-0.100	-2.000	-2.000	0	0	0
19	x18	0	0	0	0	-0.100	-0.100	-2.000	-2.000	0	0	0
20	x19	0	0	0	0	-0.567	-0.567	-0.633	-0.633	0	0	0
21	x20	0	0	0	0	0.033	0.033	-0.733	-0.733	0	0	0
22	x21	0	0	0	0	0.000	0.000	0.000	0.000	0	0	0
23	x22	0	0	0	0	-1.352	-1.352	-1.009	-1.009	0	0	0
24	x23	0	0	0	0	0.022	0.022	-0.956	-0.956	0	0	0
25	x24	0	0	0	0	-0.858	-0.858	-1.807	-1.807	0	0	0
26	x25	0	0	0	0	-0.900	-0.900	-1.950	-1.950	0	0	0
27	x26	0	0	0	0	0.000	0.000	-2.100	-2.100	0	0	0
28	x27	0	0	0	0	-1.829	-1.829	-1.735	-1.735	0	0	0
29	x28	0	0	0	0	0.000	0.000	0.000	0.000	0	0	0
30	x29	0	0	0	0	-1.216	-1.216	-1.522	-1.522	0	0	0
31	x30	0	0	0	0	0.000	0.000	-2.100	-2.100	0	0	0
32	x31	0	0	0	0	0.000	0.000	0.000	0.000	0	0	0
33	x32	0	0	0	0	0.000	0.000	0.000	0.000	0	0	0
34	x33	0	0	0	0	-1.340	-1.340	-0.625	-0.625	0	0	0
35	x34	0	0	0	0	-1.770	-1.770	-0.825	-0.825	0	0	0
36	x35	0	0	0	0	0.000	0.000	0.000	0.000	0	0	0
37	x36	0	0	0	0	0.000	0.000	0.000	0.000	0	0	0
38	x37	0	0	0	0	0.000	0.000	0.000	0.000	0	0	0

APPENDIX B: Table B-10- 2

BPM Base Year Re-Calibration: Stage 3 / RC-BPM-55G

Mode Specific Constants - Purpose 1: Work / Medium Income

index	description	da	sr2	sr3	sr4	wt	dt	wc	dc	tx	nm	sb
1	In Manhat	0	0	0	0	-0.994	-0.994	-0.244	-0.244	0	0	0
2	x2	0	0	0	0	-0.883	-0.883	-0.217	-0.217	0	0	0
3	x3	0	0	0	0	-1.325	-1.325	-0.325	-0.325	0	0	0
4	x4	0	0	0	0	-1.325	-1.325	-0.325	-0.325	0	0	0
5	x5	0	0	0	0	0.000	0.000	0.000	0.000	0	0	0
6	x6	0	0	0	0	-1.084	-1.084	-0.266	-0.266	0	0	0
7	x7	0	0	0	0	-1.325	-1.325	-0.325	-0.325	0	0	0
8	x8	0	0	0	0	0.100	0.100	-2.200	-2.200	0	0	0
11	x9	0	0	0	0	0.100	0.100	-2.200	-2.200	0	0	0
12	x10	0	0	0	0	0.000	0.000	0.000	0.000	0	0	0
13	x11	0	0	0	0	0.100	0.100	-2.200	-2.200	0	0	0
14	x12	0	0	0	0	0.100	0.100	-2.200	-2.200	0	0	0
15	x13	0	0	0	0	0.100	0.100	-2.200	-2.200	0	0	0
16	x14	0	0	0	0	0.100	0.100	-2.200	-2.200	0	0	0
17	x15	0	0	0	0	-3.975	-3.975	-0.975	-0.975	0	0	0
18	x16	0	0	0	0	-1.169	-1.169	-1.717	-1.717	0	0	0
19	x17	0	0	0	0	-3.975	-3.975	-0.975	-0.975	0	0	0
20	x18	0	0	0	0	-1.950	-1.950	-1.313	-1.313	0	0	0
21	x19	0	0	0	0	-0.071	-0.071	-1.429	-1.429	0	0	0
22	x20	0	0	0	0	-0.100	-0.100	-2.000	-2.000	0	0	0
23	x21	0	0	0	0	-0.100	-0.100	-2.000	-2.000	0	0	0
24	x22	0	0	0	0	-0.100	-0.100	-2.000	-2.000	0	0	0
25	x23	0	0	0	0	-0.567	-0.567	-0.633	-0.633	0	0	0
26	x24	0	0	0	0	0.029	0.029	-0.629	-0.629	0	0	0
27	x25	0	0	0	0	-0.364	-0.364	-1.307	-1.307	0	0	0
28	x26	0	0	0	0	-1.950	-1.950	-1.313	-1.313	0	0	0
29	x27	0	0	0	0	-0.969	-0.969	-1.056	-1.056	0	0	0
30	x28	0	0	0	0	-0.736	-0.736	-1.850	-1.850	0	0	0
31	x29	0	0	0	0	-0.900	-0.900	-1.950	-1.950	0	0	0
32	x30	0	0	0	0	0.000	0.000	-2.100	-2.100	0	0	0
33	x31	0	0	0	0	0.000	0.000	0.000	0.000	0	0	0
34	x32	0	0	0	0	-1.174	-1.174	-0.875	-0.875	0	0	0
35	x33	0	0	0	0	0.000	0.000	-2.100	-2.100	0	0	0
36	x34	0	0	0	0	-1.855	-1.855	-0.865	-0.865	0	0	0
37	x35	0	0	0	0	0.000	0.000	0.000	0.000	0	0	0
38	x36	0	0	0	0	-0.301	-0.301	-0.313	-0.313	0	0	0
39	x37	0	0	0	0	-1.325	-1.325	-1.375	-1.375	0	0	0
40	x38	0	0	0	0	-0.664	-0.664	-0.310	-0.310	0	0	0
41	x39	0	0	0	0	0.000	0.000	0.000	0.000	0	0	0
42	x40	0	0	0	0	0.000	0.000	0.000	0.000	0	0	0
43	Br-Manh	0	0	0	0	-5.3	-5.3	-1.3	-1.3	0	0	0

APPENDIX B: Table B-10- 3
BPM Base Year Re-Calibration: Stage 3 / RC-BPM-55G
Mode Specific Constants - Purpose 3: Work / High Income

index	description	da	sr2	sr3	sr4	wt	dt	wc	dc	tx	nm	sb
1	In_Manhat	0	0	0	0	-0.994	-0.994	-0.244	-0.244	0	0	0
2	x2	0	0	0	0	-0.883	-0.883	-0.217	-0.217	0	0	0
3	x3	0	0	0	0	-1.325	-1.325	-0.325	-0.325	0	0	0
5	x5	0	0	0	0	-0.294	-0.294	-0.072	-0.072	0	0	0
6	x6	0	0	0	0	-1.084	-1.084	-0.266	-0.266	0	0	0
7	x7	0	0	0	0	-1.325	-1.325	-0.325	-0.325	0	0	0
8	x8	0	0	0	0	0.100	0.100	-2.200	-2.200	0	0	0
10	x9	0	0	0	0	0.000	0.000	0.000	0.000	0	0	0
11	x10	0	0	0	0	0.100	0.100	-2.200	-2.200	0	0	0
12	x11	0	0	0	0	0.100	0.100	-2.200	-2.200	0	0	0
13	x12	0	0	0	0	0.100	0.100	-2.200	-2.200	0	0	0
14	x13	0	0	0	0	-5.300	-5.300	-1.300	-1.300	0	0	0
15	x14	0	0	0	0	0.000	0.000	0.000	0.000	0	0	0
16	x15	0	0	0	0	-5.300	-5.300	-1.300	-1.300	0	0	0
17	x16	0	0	0	0	0.000	0.000	0.000	0.000	0	0	0
18	x17	0	0	0	0	-3.975	-3.975	-0.975	-0.975	0	0	0
19	x18	0	0	0	0	-2.600	-2.600	-1.750	-1.750	0	0	0
20	x19	0	0	0	0	0.000	0.000	0.000	0.000	0	0	0
21	x20	0	0	0	0	-0.100	-0.100	-2.000	-2.000	0	0	0
22	x21	0	0	0	0	-0.060	-0.060	-1.200	-1.200	0	0	0
23	x22	0	0	0	0	-0.100	-0.100	-2.000	-2.000	0	0	0
24	x23	0	0	0	0	-0.100	-0.100	-2.000	-2.000	0	0	0
25	x24	0	0	0	0	-0.100	-0.100	-2.000	-2.000	0	0	0
26	x25	0	0	0	0	-0.100	-0.100	-2.000	-2.000	0	0	0
27	x26	0	0	0	0	-0.100	-0.100	-2.000	-2.000	0	0	0
28	x27	0	0	0	0	-0.567	-0.567	-0.633	-0.633	0	0	0
29	x28	0	0	0	0	0.033	0.033	-0.733	-0.733	0	0	0
30	x29	0	0	0	0	0.000	0.000	0.000	0.000	0	0	0
31	x30	0	0	0	0	-1.486	-1.486	-1.000	-1.000	0	0	0
32	x31	0	0	0	0	0.022	0.022	-0.956	-0.956	0	0	0
33	x32	0	0	0	0	-0.858	-0.858	-1.807	-1.807	0	0	0
34	x33	0	0	0	0	-0.900	-0.900	-1.950	-1.950	0	0	0
35	x34	0	0	0	0	-0.791	-0.791	-0.475	-0.475	0	0	0
36	x35	0	0	0	0	-0.864	-0.864	-1.928	-1.928	0	0	0
37	x36	0	0	0	0	0.000	0.000	-2.100	-2.100	0	0	0
38	x37	0	0	0	0	-2.221	-2.221	-1.657	-1.657	0	0	0
39	x38	0	0	0	0	0.000	0.000	-2.100	-2.100	0	0	0
40	x39	0	0	0	0	0.000	0.000	-2.100	-2.100	0	0	0
41	x40	0	0	0	0	0.000	0.000	0.000	0.000	0	0	0
42	x41	0	0	0	0	-2.680	-2.680	-1.250	-1.250	0	0	0
43	x42	0	0	0	0	0	0	0	0	0	0	0
44	Br-Manh	0	0	0	0	-5.3	-5.3	-1.3	-1.3	0	0	0

APPENDIX B: Table B-10- 4
BPM Base Year Re-Calibration: Stage 3 / RC-BPM-55G
Mode Specific Constants - Purpose 4: School

index	description	da	sr2	sr3	sr4	wt	dt	wc	dc	tx	nm	sb
1	In_Manhat	0	0	0	0	-0.994	-0.994	-0.244	-0.244	0	0	0
2	x2	0	0	0	0	-0.994	-0.994	-0.244	-0.244	0	0	0
3	x3	0	0	0	0	-0.807	-0.807	-0.198	-0.198	0	0	0
4	x4	0	0	0	0	-0.919	-0.919	-1.894	-1.894	0	0	0
5	x5	0	0	0	0	-1.084	-1.084	-1.691	-1.691	0	0	0
6	x6	0	0	0	0	0.000	0.000	0.000	0.000	0	0	0
7	x7	0	0	0	0	0.000	0.000	0.000	0.000	0	0	0
8	x8	0	0	0	0	0.000	0.000	0.000	0.000	0	0	0
9	x9	0	0	0	0	-0.850	-0.850	-0.950	-0.950	0	0	0
10	x10	0	0	0	0	-0.885	-0.885	-0.979	-0.979	0	0	0

APPENDIX B: Table B-10- 5
BPM Base Year Re-Calibration: Stage 3 / RC-BPM-55G
Mode Specific Constants - Purpose 5: University

index	description	da	sr2	sr3	sr4	wt	dt	wc	dc	tx	nm	sb
1	In Manhat	0	0	0	0	-0.994	-0.994	-0.244	-0.244	0	0	0
2	x2	0	0	0	0	-0.956	-0.956	-1.069	-1.069	0	0	0
3	x3	0	0	0	0	-0.613	-0.613	-1.263	-1.263	0	0	0
4	x4	0	0	0	0	-1.325	-1.325	-0.325	-0.325	0	0	0
5	x5	0	0	0	0	-1.698	-1.698	-0.536	-0.536	0	0	0
6	x6	0	0	0	0	-1.084	-1.084	-0.266	-0.266	0	0	0
10	x7	0	0	0	0	-0.095	-0.095	-1.909	-1.909	0	0	0
11	x8	0	0	0	0	-0.100	-0.100	-2.000	-2.000	0	0	0
12	x9	0	0	0	0	-0.306	-0.306	-0.631	-0.631	0	0	0
13	x10	0	0	0	0	-0.638	-0.638	-0.713	-0.713	0	0	0
14	x11	0	0	0	0	-1.670	-1.670	-1.239	-1.239	0	0	0
15	x12	0	0	0	0	-0.552	-0.552	-1.913	-1.913	0	0	0
16	x13	0	0	0	0	-0.772	-0.772	-1.509	-1.509	0	0	0
17	x14	0	0	0	0	0.000	0.000	0.000	0.000	0	0	0
21	x15	0	0	0	0	0.000	0.000	0.000	0.000	0	0	0
23	x16	0	0	0	0	-2.297	-2.297	-1.071	-1.071	0	0	0
25	x17	0	0	0	0	0.000	0.000	0.000	0.000	0	0	0
28	x18	0	0	0	0	0.000	0.000	0.000	0.000	0	0	0
29	x19	0	0	0	0	0.000	0.000	0.000	0.000	0	0	0
30	x20	0	0	0	0	0.000	0.000	0.000	0.000	0	0	0

APPENDIX B: Table B-10- 6
BPM Base Year Re-Calibration: Stage 3 / RC-BPM-55G
Mode Specific Constants - Purpose 6: Maintenance

index	description	da	sr2	sr3	sr4	wt	dt	wc	dc	tx	nm	sb
1	Manhattan	0	0	0	0	-0.994	-0.994	-0.244	-0.244	0	0	0
2	x2	0	0	0	0	-1.248	-1.248	-0.840	-0.840	0	0	0
3	x3	0	0	0	0	-1.325	-1.325	-0.325	-0.325	0	0	0
4	x4	0	0	0	0	-1.325	-1.325	-0.325	-0.325	0	0	0
5	x5	0	0	0	0	0.000	0.000	0.000	0.000	0	0	0
6	x6	0	0	0	0	-1.084	-1.084	-0.266	-0.266	0	0	0
8	x7	0	0	0	0	0.100	0.100	-2.200	-2.200	0	0	0
9	x8	0	0	0	0	-4.529	-4.529	-1.429	-1.429	0	0	0
10	x9	0	0	0	0	-0.100	-0.100	-2.000	-2.000	0	0	0
11	x10	0	0	0	0	-0.100	-0.100	-2.000	-2.000	0	0	0
12	x11	0	0	0	0	-0.306	-0.306	-0.631	-0.631	0	0	0
13	x12	0	0	0	0	-0.638	-0.638	-0.713	-0.713	0	0	0
14	x13	0	0	0	0	-1.670	-1.670	-1.239	-1.239	0	0	0
15	x14	0	0	0	0	-0.579	-0.579	-1.929	-1.929	0	0	0
17	x15	0	0	0	0	0.000	0.000	0.000	0.000	0	0	0
18	x16	0	0	0	0	-1.555	-1.555	-1.790	-1.790	0	0	0
19	x17	0	0	0	0	0.000	0.000	-2.100	-2.100	0	0	0
21	x18	0	0	0	0	-0.903	-0.903	-0.421	-0.421	0	0	0
22	x19	0	0	0	0	0.000	0.000	0.000	0.000	0	0	0
26	x20	0	0	0	0	-1.084	-1.084	-1.125	-1.125	0	0	0
27	x21	0	0	0	0	-1.325	-1.325	-1.375	-1.375	0	0	0
30	x22	0	0	0	0	0.000	0.000	0.000	0.000	0	0	0
31	x23	0	0	0	0	0.100	0.100	-2.200	-2.200	0	0	0
32	x24	0	0	0	0	0.067	0.067	-1.467	-1.467	0	0	0
35	x25	0	0	0	0	0.000	0.000	0.000	0.000	0	0	0
36	x26	0	0	0	0	-0.082	-0.082	-1.636	-1.636	0	0	0
37	x27	0	0	0	0	-0.100	-0.100	-2.000	-2.000	0	0	0

APPENDIX B: Table B-10- 7
BPM Base Year Re-Calibration: Stage 3 / RC-BPM-55G
Mode Specific Constants - Purpose 7: Discretionary

index	description	da	sr2	sr3	sr4	wt	dt	wc	dc	tx	nm	sb
1	In_Manhat	0	0	0	0	-0.994	-0.994	-0.244	-0.244	0	0	0
2	x2	0	0	0	0	-0.994	-0.994	-0.244	-0.244	0	0	0
3	x3	0	0	0	0	-1.325	-1.325	-0.325	-0.325	0	0	0
4	x4	0	0	0	0	-1.325	-1.325	-0.325	-0.325	0	0	0
5	x5	0	0	0	0	0.000	0.000	0.000	0.000	0	0	0
6	x6	0	0	0	0	-1.084	-1.084	-0.266	-0.266	0	0	0
7	x7	0	0	0	0	-1.700	-1.700	-1.900	-1.900	0	0	0
8	x8	0	0	0	0	0.100	0.100	-2.200	-2.200	0	0	0
9	x9	0	0	0	0	-4.529	-4.529	-1.429	-1.429	0	0	0
10	x10	0	0	0	0	-0.100	-0.100	-2.000	-2.000	0	0	0
11	x11	0	0	0	0	-0.100	-0.100	-2.000	-2.000	0	0	0
12	x12	0	0	0	0	-0.306	-0.306	-0.631	-0.631	0	0	0
13	x13	0	0	0	0	-0.638	-0.638	-0.713	-0.713	0	0	0
14	x14	0	0	0	0	-0.987	-0.987	-1.651	-1.651	0	0	0
16	x15	0	0	0	0	-0.675	-0.675	-1.988	-1.988	0	0	0
17	x16	0	0	0	0	0.000	0.000	0.000	0.000	0	0	0
18	x17	0	0	0	0	-0.899	-0.899	-1.643	-1.643	0	0	0
21	x18	0	0	0	0	0.000	0.000	0.000	0.000	0	0	0
22	x19	0	0	0	0	-1.855	-1.855	-0.865	-0.865	0	0	0
25	x21	0	0	0	0	0.000	0.000	0.000	0.000	0	0	0
29	x22	0	0	0	0	-0.838	-0.838	-0.391	-0.391	0	0	0
30	x23	0	0	0	0	0.000	0.000	0.000	0.000	0	0	0
31	x24	0	0	0	0	0.100	0.100	-2.200	-2.200	0	0	0
32	x25	0	0	0	0	0.067	0.067	-1.467	-1.467	0	0	0
33	x26	0	0	0	0	0.100	0.100	-2.200	-2.200	0	0	0
35	x27	0	0	0	0	0.000	0.000	0.000	0.000	0	0	0
36	x28	0	0	0	0	-0.082	-0.082	-1.636	-1.636	0	0	0

APPENDIX B: Table B-10- 8
BPM Base Year Re-Calibration: Stage 3 / RC-BPM-55G
Mode Specific Constants - Purpose 8: At-Work

index	description	da	sr2	sr3	sr4	wt	dt	wc	dc	tx	nm	sb
1	In Manhat	0	0	0	0	-0.994	-0.994	-0.244	-0.244	0	0	0
2	x2	0	0	0	0	-0.956	-0.956	-1.069	-1.069	0	0	0
3	x3	0	0	0	0	-0.807	-0.807	-0.198	-0.198	0	0	0
5	x4	0	0	0	0	-1.430	-1.430	-1.843	-1.843	0	0	0
6	x5	0	0	0	0	0.000	0.000	0.000	0.000	0	0	0
7	x6	0	0	0	0	0.000	0.000	0.000	0.000	0	0	0
8	x7	0	0	0	0	-0.872	-0.872	-0.965	-0.965	0	0	0
9	x8	0	0	0	0	-0.850	-0.850	-0.950	-0.950	0	0	0
10	x9	0	0	0	0	-0.043	-0.043	-1.235	-1.235	0	0	0

APPENDIX C: BPM 1996 AND 2002 – CORE MODEL “SCORE-CARD” REPORTS

Enter scenario name: 2002B_RC55G-5C_PB

Data should be entered in yellow cells; all other numbers are generated through formulas

HAI Output

Check HAI Reports: 2_Alt\Scenario\3_eval\haisummary.txt

Enter Total number of hhs (on or near line 38 in report)

	HH - Size 1	HH - Size 2	HH - Size 3	HH - Size 4	HH - Size 5	HH - Size 6+	Total	Estimate of Total Population
Summary line	2,195,421	2,130,142	1,284,108	1,115,877	597,534	464,350	7,787,432	20,591,742
% of total hhs	28.19	27.35	16.49	14.33	7.67	5.96		

Enter Total number of hhs by auto ownership (on or near line 152 in report)

	0 auto hhs	1 auto hhs	2 auto hhs	3+ auto hhs
Summary line	2,460,573	2,485,830	2,014,425	826,604
% of total hhs	31.60	31.92	25.87	10.61

Enter Total number of hhs by income (on or near line 190 in report)

	low inc hhs	med. inc. hhs	high inc. hhs
Summary line	1,136,809	5,507,838	1,142,785
% of total hhs	14.60	70.73	14.67

Check HAI Reports: 2_Alt\Scenario\3_Eval\hajtrips.txt

Total regional journeys (from line 567 in report):

	Low inc work Purpose 1	Med inc work Purpose 2	High inc work Purpose 3	School Purpose 4	University Purpose 5	Maintenance Purpose 6	Discretionary Purpose 7	At Work Purpose 8	Total
Summary line	388,372	5,557,372	1,667,655	3,829,430	504,724	10,809,231	4,070,535	1,279,554	28,106,873

MDC Output

Check MDC Reports: 2_Alt\Scenario\3_Eval\sum_reps_(scen).txt

Enter mode split (from line 424 in report)

	SOV	HOV2	HOV3	HOV4+	WT	DT	WC	DC	TAXI	NM	SB	Total
Summary line	9,780,451	4,599,079	1,571,756	631,030	3,662,015	220,196	281,182	213,107	1,683,010	4,666,173	798,874	28,106,873

Total CBD to CBD journeys (from line 879):	883,200	All journeys to CBD (from line 887):	3,054,481	Compare HAI output to MDC output	1.0000
			% of total journeys	Should be within 0.0001	
			10.87		

Stops Made by mode (lines 1233-1240)

	SOV	HOV2	HOV3	HOV4+	WT	DT	WC	DC	TAXI	Total
No Stops	5,650,172	2,536,515	975,736	377,106	2,149,495	141,367	250,091	153,892	1,212,918	18,912,339
Outbound Only	1,124,763	595,878	157,683	69,147	544,426	22,087	9,202	17,852	128,424	2,669,462
Inbound Only	2,199,057	906,018	290,466	120,013	656,062	37,289	14,789	24,297	279,424	4,527,415
Inbound and Outbound Stops	806,459	560,668	147,871	64,764	312,032	19,453	7,100	17,066	62,244	1,997,657
Total	9,780,451	4,599,079	1,571,756	631,030	3,662,015	220,196	281,182	213,107	1,683,010	28,106,873

TOD Results

Check TOD Reports: 2_Alt\Scenario\3_Eval\pap.prn

Contents of TOD input files (around lines 228-238)

	Journey Records	Trips
Mode Choice Journey Records	28,106,874	56,475,843
Trucks	416,174	1,198,857
Commercial Vehicle	297,182	550,930
Externals	745,652	1,338,702

Total trips from Report #1 in pap.prn file (excludes non-motorized travel) (around line 295)

Trips	48,372,141	This number should be between	48,634,238	and	48,808,801
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Highway Vehicle Trips by Mode (near line 2312)

	Drive Alone	Externals	HOV2	HOV3+	Taxi	Trucks	Commercial	Total
Summary line	24,497,640	1,338,702	5,910,653	1,679,707	2,787,655	1,198,857	550,930	37,964,144
Check against these control totals	24,497,640	1,338,702	5,910,695	1,681,349	2,784,540	1,198,857	550,930	

Transit Person Trips by Mode (near line 2396)

	Walk to Transit	Drive to Transit	Walk to Commuter Rail	Drive to Commuter Rail	Total
Summary line	9,268,951	391,855	694,688	396,049	10,751,543
Check against these control totals	9,148,582	538,674	600,555	502,495	10,790,306

Check TOD Reports: 2_Alt\Scenario\3_Eval\Tod_AM.prn, Tod_MD.prn, Tod_PM.prn and Tod_NT.prn

Contents of Trip Tables (near line 78-92 in each report)

Highway Trip Tables	AM	MD	PM	NT	Daily
Drive Alone	4,416,118	8,752,700	7,115,954	4,212,868	24,497,640
HOV2 and Taxi	1,726,009	3,244,241	2,368,950	1,359,108	8,698,308
HOV3	377,549	624,313	419,020	258,825	1,679,707
External	194,867	506,889	309,129	327,817	1,338,702
Trucks	414,896	451,799	152,153	180,009	1,198,857
Other Commercial	197,068	211,317	69,533	73,012	550,930
Total	7,326,507	13,791,259	10,434,739	6,411,639	37,964,144

Transit Trip Tables

	AM	MD	PM	NT	Daily
Walk to Transit	2,567,570	3,293,035	2,612,294	796,052	9,268,951
Drive to Transit	151,577	106,385	109,075	24,818	391,855
Walk to Commuter Rail	182,839	224,474	228,158	59,217	694,688
Drive to Commuter Rail	169,762	86,054	121,275	18,958	396,049
Total	3,071,748	3,709,948	3,070,802	899,045	10,751,543

Highway Assignment

Check Assignment Reports: TCW_rep.txt

Demand in assignment

	AM	MD	PM	NT	Total
Drive Alone demand	4,004,545	7,726,017	6,374,575	3,766,540	21,871,677
Drive Alone intranodal / intrazonal	411,573	1,026,683	741,379	446,328	2,625,963
HOV2 and Taxi demand	1,499,564	2,873,034	2,143,409	1,236,215	7,752,222
HOV2 and Taxi intranodal / intrazonal	226,445	371,207	225,541	122,893	946,086
HOV3+ demand	296,794	516,779	365,191	229,662	1,408,426
HOV3+ intranodal / intrazonal	80,755	107,534	53,829	29,163	271,281
External demand	262,541	470,559	327,220	239,914	1,300,235
External intranodal / intrazonal	0	0	0	0	0
Truck demand	339,306	370,162	125,499	151,800	986,767
Truck intranodal / intrazonal	75,590	81,637	26,654	28,209	212,090
Commercial demand	185,739	199,214	65,591	68,858	519,402
Commercial intranodal / intrazonal	11,329	12,103	3,942	4,154	31,528
Total Demand	6,588,489	12,155,765	9,401,485	5,692,989	33,838,729
Total intranodal / intrazonal Demand	805,692	1,599,164	1,051,345	630,747	4,086,948

Assigned demand	37,925,677
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Number of Iterations	43	30	39	13
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Transit Assignment

Check Assignment Reports: TCW_rep.txt

Demand in assignment

	AM	(A)
Demand on TNETAMWS2.TNW network	2,567,570	
Intranodal Demand	22,151	
Demand on TNETAMDS2.TNW network	151,577	
Intranodal Demand	29	
Demand on TNETAMWC2.TNW network	182,839	
Intranodal Demand	1,262	
Demand on TNETAMDC2.TNW network	169,762	
Intranodal Demand	5	
Total demand	3,071,748	
Total intranodal demand	23,447	

Assigned demand	3,048,301
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NOTE: (A) - Transit Assignment based on RC-BPM-45G (to be updated)

Enter scenario name: Base Year 1996 - March 2003

Data should be entered in yellow cells; all other numbers are generated through formulas

HAI Output

Check HAI Reports: 2_Alt\Scenario\3_eval\hajsummary.txt

Enter Total number of hhs (on or near line 38 in report)

	HH - Size 1	HH - Size 2	HH - Size 3	HH - Size 4	HH - Size 5	HH - Size 6+	Total	Estimate of Total Population
Summary line	1,961,480	2,038,971	1,218,609	1,054,493	537,683	381,421	7,192,657	18,928,304
% of total hhs	27.27	28.35	16.94	14.66	7.48	5.30		

Enter Total number of hhs by auto ownership (on or near line 152 in report)

	0 auto hhs	1 auto hhs	2 auto hhs	3+ auto hhs
Summary line	2,134,788	2,282,955	1,904,218	870,696
% of total hhs	29.68	31.74	26.47	12.11

Enter Total number of hhs by income (on or near line 190 in report)

	low inc hhs	med. inc. hhs	high inc. hhs
Summary line	1,056,518	5,078,720	1,057,419
% of total hhs	14.69	70.61	14.70

Check HAI Reports: 2_Alt\Scenario\3_Eval\hajtrips.txt

Total regional journeys (from line 567 in report):

	Low inc work Purpose 1	Med inc work Purpose 2	High inc work Purpose 3	School Purpose 4	University Purpose 5	Maintenance Purpose 6	Discretionary Purpose 7	At Work Purpose 8	Total
Summary line	290,677	4,975,090	1,610,807	3,070,506	494,226	8,462,295	2,692,555	1,020,527	22,616,683

MDC Output

Check MDC Reports: 2_Alt\Scenario\3_Eval\sum_reps_(scen).txt

Enter mode split (from line 424 in report)

	SOV	HOV2	HOV3	HOV4+	WT	DT	WC	DC	TAXI	NM	SB	Total
Summary line	7,798,519	4,002,749	1,732,555	1,124,725	2,963,547	234,618	180,261	176,143	299,189	3,169,897	934,473	22,616,676

Total CBD to CBD journeys (from line 879):	658,922	All journeys to CBD (from line 887):	2,322,299	Compare HAI output to MDC output	1.0000
			% of total journeys	Should be within 0.0001	
			10.27		

Stops Made by mode (lines 1233-1240)

	SOV	HOV2	HOV3	HOV4+	WT	DT	WC	DC	TAXI	Total
No Stops	5,065,013	2,405,435	1,148,277	722,591	1,808,185	140,410	129,549	119,215	238,426	15,881,471
Outbound Only	779,838	471,570	164,872	113,810	388,303	29,437	14,657	16,988	15,507	1,994,982
Inbound Only	1,422,351	708,204	286,398	193,570	537,825	44,234	24,367	24,171	35,998	3,277,118
Inbound and Outbound Stops	531,317	417,540	133,008	94,754	229,234	20,537	11,688	15,769	9,258	1,463,105
Total	7,798,519	4,002,749	1,732,555	1,124,725	2,963,547	234,618	180,261	176,143	299,189	22,616,676

TOD Results

Check TOD Reports: 2_Alt\Scenario\3_Eval\pap.prn

Contents of TOD input files (around lines 228-238)

	Journey Records	Trips
Mode Choice Journey Records	22,616,677	45,222,922
Trucks	463,416	1,237,967
Commercial Vehicle	324,492	600,809
Externals	702,556	1,200,954

Total trips from Report #1 in pap.prn file (excludes non-motorized travel) (around line 295)

Trips	40,064,342	This number should be between	40,053,912	and	40,241,354
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Highway Vehicle Trips by Mode (near line 2312)

	Drive Alone	Externals	HOV2	HOV3+	Taxi	Trucks	Commercial	Total
Summary line	18,816,744	1,200,954	5,002,105	2,064,126	476,272	1,237,967	600,809	29,398,977
Check against these control totals	18,861,861	1,200,954	5,010,176	2,063,971	477,428	1,237,967	600,809	

Transit Person Trips by Mode (near line 2396)

	Walk to Transit	Drive to Transit	Walk to Commuter Rail	Drive to Commuter Rail	Total
Summary line	7,455,872	404,577	512,607	324,230	8,697,286
Check against these control totals	7,311,690	583,981	422,922	424,983	8,743,576

Check TOD Reports: 2_Alt\Scenario\3_Eval\Tod_AM.prn, Tod_MD.prn, Tod_PM.prn and Tod_NT.prn

Contents of Trip Tables (near line 78-92 in each report)

Highway Trip Tables	AM	MD	PM	NT	Daily
Drive Alone	4,923,697	6,964,013	5,691,344	2,483,761	20,062,815
HOV2 and Taxi	1,178,520	1,748,664	1,451,140	633,664	5,011,988
HOV3	478,813	723,750	583,287	278,032	2,063,882
External	83,766	190,415	141,280	61,619	477,080
Trucks	428,825	466,675	157,371	185,096	1,237,967
Other Commercial	214,044	231,030	75,959	79,776	600,809
Total	7,307,665	10,324,547	8,100,381	3,721,948	29,454,541

Transit Trip Tables

	AM	MD	PM	NT	Daily
Walk to Transit	2,196,947	2,495,997	2,174,723	588,205	7,455,872
Drive to Transit	147,009	117,218	114,348	26,002	404,577
Walk to Commuter Rail	189,824	91,489	203,765	27,529	512,607
Drive to Commuter Rail	138,508	55,213	114,875	15,634	324,230
Total	2,672,288	2,759,917	2,607,711	657,370	8,697,286

Highway Assignment

Check Assignment Reports: TCW_rep.txt

Demand in assignment

	AM	MD	PM	NT	Total
Drive Alone demand	4,488,833	6,210,845	5,159,762	2,257,389	18,116,829
Drive Alone intranodal / intrazonal	434,864	753,168	531,582	226,372	1,945,986
HOV2 and Taxi demand	999,526	1,503,764	1,275,282	559,164	4,337,736
HOV2 and Taxi intranodal / intrazonal	178,994	244,900	175,858	74,500	674,252
HOV3+ demand	390,634	610,192	508,788	244,140	1,753,754
HOV3+ intranodal / intrazonal	88,179	113,558	74,499	33,892	310,128
External demand	81,699	185,096	137,396	60,271	464,462
External intranodal / intrazonal	2,067	5,319	3,884	1,348	12,618
Truck demand	367,634	401,756	135,676	162,611	1,067,677
Truck intranodal / intrazonal	61,191	64,919	21,695	22,485	170,290
Commercial demand	204,037	220,202	72,322	76,039	572,600
Commercial intranodal / intrazonal	10,007	10,828	3,637	3,737	28,209
Total Demand	6,532,363	9,131,855	7,289,226	3,359,614	26,313,058
Total intranodal / intrazonal Demand	775,302	1,192,692	811,155	362,334	3,141,483

Assigned demand	29,454,541
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Number of Iterations	33	25	26	5
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Transit Assignment

Check Assignment Reports: TCW_rep.txt

Demand in assignment

	AM
Demand on TNETAMWS2.TNW network	2,196,947
Intranodal Demand	19,055
Demand on TNETAMDS2.TNW network	147,009
Intranodal Demand	144
Demand on TNETAMWC2.TNW network	189,824
Intranodal Demand	2,262
Demand on TNETAMDC2.TNW network	138,508
Intranodal Demand	10
Total demand	2,672,288
Total intranodal demand	21,471

Assigned demand	2,650,817
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Enter scenario name: Difference (2002 vs 1996)

Data should be entered in yellow cells; all other numbers are generated through formulas

HAI Output

Check HAI Reports: 2_Alt\Scenario\3_eval\haisummary.txt

Enter Total number of hhs (on or near line 38 in report)

	HH - Size 1	HH - Size 2	HH - Size 3	HH - Size 4	HH - Size 5	HH - Size 6+	Total	Estimate of Total Population
Summary line	233,941	91,171	65,499	61,384	59,851	82,929	594,775	1,663,438
% of total hhs	39.33	15.33	11.01	10.32	10.06	13.94		

Enter Total number of hhs by auto ownership (on or near line 152 in report)

	0 auto hhs	1 auto hhs	2 auto hhs	3+ auto hhs
Summary line	325,785	202,875	110,207	44,092
% of total hhs	54.77	34.11	18.53	-7.41

Enter Total number of hhs by income (on or near line 190 in report)

	low inc hhs	med. inc. hhs	high inc. hhs
Summary line	80291	429118	85366
% of total hhs	13.50	72.15	14.35

Check HAI Reports: 2_Alt\Scenario\3_Eval\hajttrips.txt

Total regional journeys (from line 567 in report):

	Low inc work Purpose 1	Med inc work Purpose 2	High inc work Purpose 3	School Purpose 4	University Purpose 5	Maintenance Purpose 6	Discretionary Purpose 7	At Work Purpose 8	Total
Summary line	97,695	582,282	56,848	758,924	10,498	2,346,936	1,377,980	259,027	5,490,190

MDC Output

Check MDC Reports: 2_Alt\Scenario\3_Eval\sum_reps_(scen).txt

Enter mode split (from line 424 in report)

	SOV	HOV2	HOV3	HOV4+	WT	DT	WC	DC	TAXI	NM	SB	Total
Summary line	1,981,932	596,330	-160,799	-493,695	698,468	-14,422	100,921	36,964	1,383,821	1,496,276	-135,599	5,490,197

Total CBD to CBD journeys (from line 879):	224,278	All journeys to CBD (from line 887):	732,182	Compare HAI output to MDC output	1.0000
			% of total journeys	13.34	Should be within 0.0001

Stops Made by mode (lines 1233-1240)

	SOV	HOV2	HOV3	HOV4+	WT	DT	WC	DC	TAXI	Total
No Stops	585,159	131,080	-172,541	-345,485	341,310	957	120,542	34,677	974,492	3,030,868
Outbound Only	344,925	124,308	-7,189	-44,663	156,123	-7,350	-5,455	864	112,917	674,480
Inbound Only	776,706	197,814	4,068	-73,557	118,237	-6,945	-9,578	126	243,426	1,250,297
Inbound and Outbound Stops	275,142	143,128	14,863	-29,990	82,798	-1,084	-4,588	1,297	52,986	534,552
Total	1,981,932	596,330	-160,799	-493,695	698,468	-14,422	100,921	36,964	1,383,821	5,490,197

TOD Results

Check TOD Reports: 2_Alt\Scenario\3_Eval\pap.prn

Contents of TOD input files (around lines 228-238)

	Journey Records	Trips
Mode Choice Journey Records	5,490,197	11,252,921
Trucks	-47,242	-39,110
Commercial Vehicle	-27,310	-49,879
Externals	43,096	137,748

Total trips from Report #1 in pap.prn file (excludes non-motorized travel) (around line 295)

Trips 8,307,799 This number should be between **8,580,326** and **8,567,447**

Highway Vehicle Trips by Mode (near line 2312)

	Drive Alone	Externals	HOV2	HOV3+	Taxi	Trucks	Commercial	Total
Summary line	5,680,896	137,748	908,548	-384,419	2,311,383	-39,110	-49,879	8,565,167
Check against these control totals	5,635,779	137,748	900,519	-382,621	2,307,112	-39,110	-49,879	

Transit Person Trips by Mode (near line 2396)

	Walk to Transit	Drive to Transit	Walk to Commuter Rail	Drive to Commuter Rail	Total
Summary line	1,813,079	-12,722	182,081	71,819	2,054,257
Check against these control totals	1,836,892	-45,307	177,633	77,512	2,046,730

Check TOD Reports: 2_Alt\Scenario\3_Eval\Tod_AM.prn, Tod_MD.prn, Tod_PM.prn and Tod_NT.prn

Contents of Trip Tables (near line 78-92 in each report)

Highway Trip Tables	AM	MD	PM	NT	Daily
Drive Alone	-507,579	1,788,687	1,424,610	1,729,107	4,434,825
HOV2 and Taxi	547,489	1,495,577	917,810	725,444	3,686,320
HOV3	-101,264	-99,437	-164,267	-19,207	-384,175
External	111,101	316,474	167,849	266,198	861,622
Trucks	-13,929	-14,876	-5,218	-5,087	-39,110
Other Commercial	-16,976	-19,713	-6,426	-6,764	-49,879
Total	18,842	3,466,712	2,334,358	2,689,691	8,509,603

Transit Trip Tables

	AM	MD	PM	NT	Daily
Walk to Transit	370,623	797,038	437,571	207,847	1,813,079
Drive to Transit	4,568	-10,833	-5,273	-1,184	-12,722
Walk to Commuter Rail	-6,985	132,985	24,393	31,688	182,081
Drive to Commuter Rail	31,254	30,841	6,400	3,324	71,819
Total	399,460	950,031	463,091	241,675	2,054,257

Highway Assignment

Check Assignment Reports: TCW_rep.txt

Demand in assignment

	AM	MD	PM	NT	Total
Drive Alone demand	-484,288	1,515,172	1,214,813	1,509,151	3,754,848
Drive Alone intranodal / intrazonal	-23,291	273,515	209,797	219,956	679,977
HOV2 and Taxi demand	500,038	1,369,270	868,127	677,051	3,414,486
HOV2 and Taxi intranodal / intrazonal	47,451	126,307	49,683	48,393	271,834
HOV3+ demand	-93,840	-93,413	-143,597	-14,478	-345,328
HOV3+ intranodal / intrazonal	-7,424	-6,024	-20,670	-4,729	-38,847
External demand	180,842	285,463	189,824	179,643	835,773
External intranodal / intrazonal	-2,067	-5,319	-3,884	-1,348	-12,618
Truck demand	-28,328	-31,594	-10,177	-10,811	-80,910
Truck intranodal / intrazonal	14,399	16,718	4,959	5,724	41,800
Commercial demand	-18,298	-20,988	-6,731	-7,181	-53,198
Commercial intranodal / intrazonal	1,322	1,275	305	417	3,319
Total Demand	56,126	3,023,910	2,112,259	2,333,375	7,525,671
Total intranodal / intrazonal Demand	30,390	406,472	240,190	268,413	945,465

Assigned demand 8,471,136

Number of Iterations	44	34	39	18
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Transit Assignment

Check Assignment Reports: TCW_rep.txt

Demand in assignment

	AM
Demand on TNETAMWS2.TNW network	370,623
Intranodal Demand	3,096
Demand on TNETAMDS2.TNW network	4,568
Intranodal Demand	-115
Demand on TNETAMWC2.TNW network	-6,985
Intranodal Demand	-1,000
Demand on TNETAMDC2.TNW network	31,254
Intranodal Demand	-5
Total demand	399,460
Total intranodal demand	1,976

Assigned demand 397,484

Enter scenario name: % Difference (2002 vs 1996)

Data should be entered in yellow cells; all other numbers are generated through formulas

HAI Output

Check HAI Reports: 2_Alt\Scenario\3_eval\hajsummary.txt

Enter Total number of hhs (on or near line 38 in report)

	HH - Size 1	HH - Size 2	HH - Size 3	HH - Size 4	HH - Size 5	HH - Size 6+	Total	Estimate of Total Population
Summary line	12%	4%	5%	6%	11%	22%	8%	
% of total hhs	144.23	54.07	65.00	70.40	134.61	262.93		

Enter Total number of hhs by auto ownership (on or near line 152 in report)

	0 auto hhs	1 auto hhs	2 auto hhs	3+ auto hhs
Summary line	15%	9%	6%	-5%
% of total hhs	184.55	107.47	69.99	-61.24

Enter Total number of hhs by income (on or near line 190 in report)

	low inc hhs	med. inc. hhs	high inc. hhs
Summary line	8%	8%	8%
% of total hhs	91.90	102.18	97.63

Check HAI Reports: 2_Alt\Scenario\3_Eval\hajtrips.txt

Total regional journeys (from line 567 in report):

	Low inc work Purpose 1	Med inc work Purpose 2	High inc work Purpose 3	School Purpose 4	University Purpose 5	Maintenance Purpose 6	Discretionary Purpose 7	At Work Purpose 8	Total
Summary line	34%	12%	4%	25%	2%	28%	51%	25%	2

MDC Output

Check MDC Reports: 2_Alt\Scenario\3_Eval\sum_reps_(scen).txt

Enter mode split (from line 424 in report)

	SOV	HOV2	HOV3	HOV4+	WT	DT	WC	DC	TAXI	NM	SB	Total
Summary line	25%	15%	-9%	-44%	24%	-6%	56%	21%	463%	47%	-15%	6

Total CBD to CBD journeys (from line 879):	34%	All journeys to CBD (from line 887):	32%	Compare HAI output to MDC output	3.2046
			% of total journeys	5.47	Should be within 0.0001

Stops Made by mode (lines 1233-1240)

	SOV	HOV2	HOV3	HOV4+	WT	DT	WC	DC	TAXI	Total
No Stops	12%	5%	-15%	-48%	19%	1%	93%	29%	409%	19%
Outbound Only	44%	26%	-4%	-39%	40%	-25%	-37%	5%	728%	34%
Inbound Only	55%	28%	1%	-38%	22%	-16%	-39%	1%	676%	38%
Inbound and Outbound Stops	52%	34%	11%	-32%	36%	-5%	-39%	8%	572%	37%
Total	25%	15%	-9%	-44%	24%	-6%	56%	21%	463%	24%

TOD Results

Check TOD Reports: 2_Alt\Scenario\3_Eval\pap.prn

Contents of TOD input files (around lines 228-238)

	Journey Records	Trips
Mode Choice Journey Records	24%	25%
Trucks	-10%	-3%
Commercial Vehicle	-8%	-8%
Externals	6%	11%

Total trips from Report #1 in pap.prn file (excludes non-motorized travel) (around line 295)

Trips	21%	This number should be between	0	and	-1
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Highway Vehicle Trips by Mode (near line 2312)

	Drive Alone	Externals	HOV2	HOV3+	Taxi	Trucks	Commercial	Total
Summary line	30%	11%	18%	-19%	485%	-3%	-8%	29%
Check against these control totals								

Transit Person Trips by Mode (near line 2396)

	Walk to Transit	Drive to Transit	Walk to Commuter Rail	Drive to Commuter Rail	Total
Summary line	24%	-3%	36%	22%	24%
Check against these control totals					

Check TOD Reports: 2_Alt\Scenario\3_Eval\Tod_AM.prn, Tod_MD.prn, Tod_PM.prn and Tod_NT.prn

Contents of Trip Tables (near line 78-92 in each report)

Highway Trip Tables	AM	MD	PM	NT	Daily
Drive Alone	-10%	26%	25%	70%	22%
HOV2 and Taxi	46%	86%	63%	114%	74%
HOV3	-21%	-14%	-28%	-7%	-19%
External	133%	166%	119%	432%	181%
Trucks	-3%	-3%	-3%	-3%	-3%
Other Commercial	-8%	-9%	-8%	-8%	-8%
Total	0%	34%	29%	72%	29%

Transit Trip Tables

	AM	MD	PM	NT	Daily
Walk to Transit	17%	32%	20%	35%	24%
Drive to Transit	3%	-9%	-5%	-5%	-3%
Walk to Commuter Rail	-4%	145%	12%	115%	36%
Drive to Commuter Rail	23%	56%	6%	21%	22%
Total	15%	34%	18%	37%	24%

Highway Assignment

Check Assignment Reports: TCW_rep.txt

Demand in assignment

	AM	MD	PM	NT	Total
Drive Alone demand	-11%	24%	24%	67%	21%
Drive Alone intranodal / intrazonal	-5%	36%	39%	97%	35%
HOV2 and Taxi demand	50%	91%	68%	121%	79%
HOV2 and Taxi intranodal / intrazonal	27%	52%	28%	65%	40%
HOV3+ demand	-24%	-15%	-28%	-6%	-20%
HOV3+ intranodal / intrazonal	-8%	-5%	-28%	-14%	-13%
External demand	221%	154%	138%	298%	180%
External intranodal / intrazonal	0%	0%	0%	0%	
Truck demand	-8%	-8%	-8%	-7%	-8%
Truck intranodal / intrazonal	24%	26%	23%	25%	25%
Commercial demand	-9%	-10%	-9%	-9%	-9%
Commercial intranodal / intrazonal	13%	12%	8%	11%	12%
Total Demand	1%	33%	29%	69%	29%
Total intranodal / intrazonal Demand	4%	34%	30%	74%	30%

Assigned demand
1

Number of Iterations	44	34	39	18
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Transit Assignment

Check Assignment Reports: TCW_rep.txt

Demand in assignment

	AM
Demand on TNETAMWS2.TNW network	17%
Intranodal Demand	16%
Demand on TNETAMDS2.TNW network	3%
Intranodal Demand	-80%
Demand on TNETAMWC2.TNW network	-4%
Intranodal Demand	-44%
Demand on TNETAMDC2.TNW network	23%
Intranodal Demand	-50%
Total demand	15%
Total intranodal demand	9%

Assigned demand
15%

APPENDIX D: DETAILED HIGHWAY VALIDATION RESULTS

APPENDIX D: Exhibit D-1

BPM Run Scenario Log

Run ID	2002 Re-Calibration Stage 3 RC-55G-5C
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	Description	FileName	FileDate/Time
Zonal SE Data	2030 Series Delivered 050111, updated 050113	Atype.DBF ZSEDBS.DBF	050113
Haj File	Updated Haj File	Trips.out	050124
Base Highway Network	HN050131: Includes corrections to the base network for Projects pre-2002	HN041115.DBD	050128
Highway Skims (Pre)	RC-54G-5 Output Skims	AMSKIM1, AMSKIM2, MDSKIM1, MDSKIM2, MDSKIM5, MDSKIM6	050124
Transit Network	BS02V05	bs02v05_rte.rts and bs02v05_ink.dbd	041230
Transit Skims	BS02V05	TAM and TMD mtx files	041231
Other Files			

Global Iterations	One Iteration of Core Model
Highway Assignment	Standard Highway Assignment outputting SOV, HOV, Trucks and Commerical Vehicle Skims
Max iterations	Highway Assignment set to 50 Iterations
Scenario Name	2002N
Control Files	Includes all control files modified by 0401203, modifications after 041115 are cosmetic for BPM Installation
Machine	Sally at PB Consult Office

Start Date	Transit Skims run 041230, Core model run 050129
Comment	Updated Highway Network

Central Version	Central 4.04.71
TransCAD Version	Transcad 4.5 Build 1.77

BPM Update 2002 - Stage 3 - Re-Calibration Tests

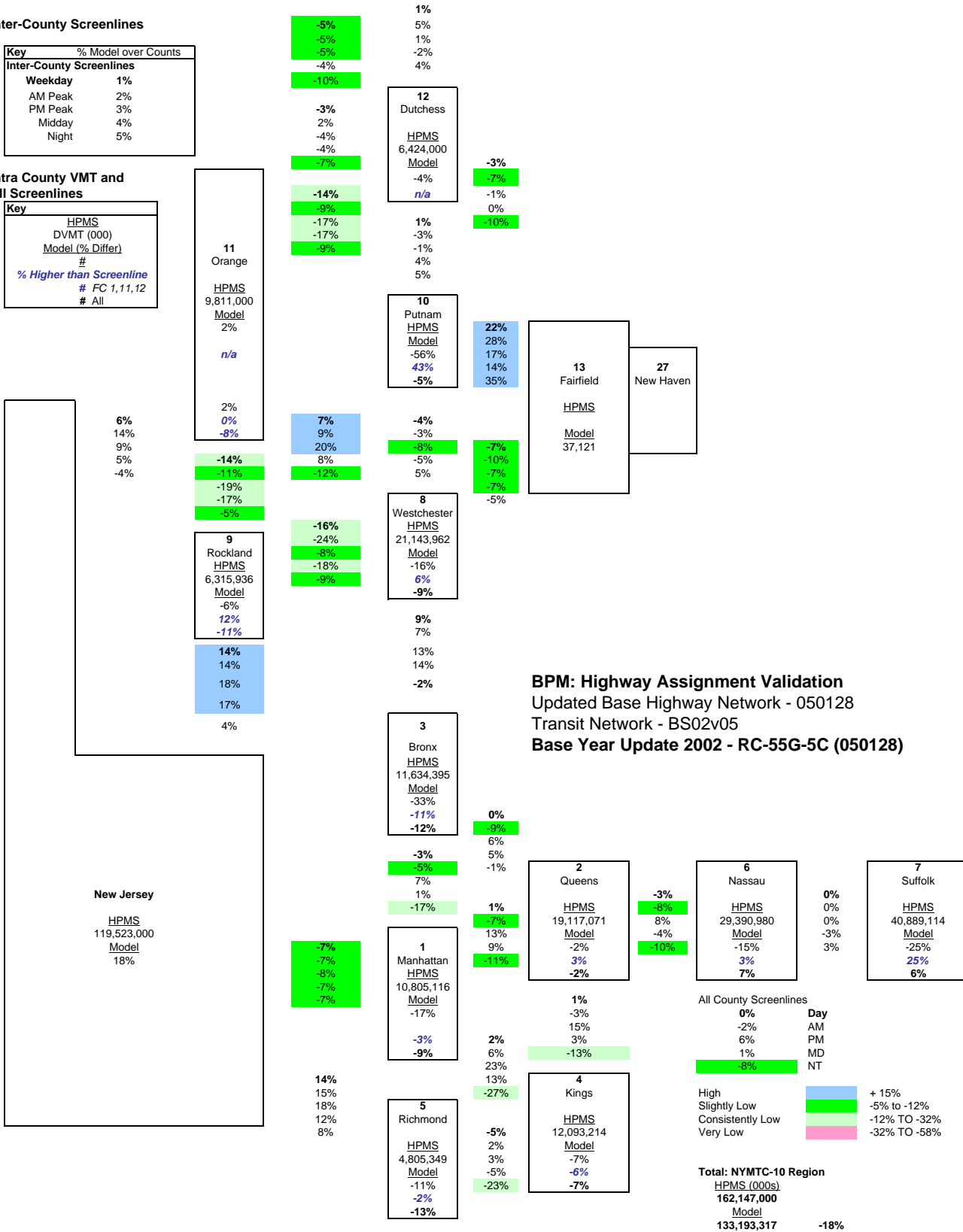
APPENDIX D: Exhibit D-2

Inter-County Screenlines

Key	% Model over Counts
Inter-County Screenlines	
Weekday	1%
AM Peak	2%
PM Peak	3%
Midday	4%
Night	5%

Intra County VMT and All Screenlines

Key	HPMS	DVMT (000)	Model (% Differ)
#			
% Higher than Screenline			
# FC 1,11,12			
# All			



NYMTC BPM - Highway Assignment Calibration
Base Year Update 2002 - RC-55G-5C (050128)

APPENDIX D: Exhibit D-3

Compared to Project Screenline Counts
Mean Weekday Count / Volume

County	Functional Class Group	Scrn. Network Links	SCREEN LINES (Mean Count)	BPM Mean Volume	Diff. BPM - Est.	% Diff. BPM from Est.	% RMSE BPM from Est.
1. Manhattan	1,11,12	41	59,373	57,495	(1,878)	-3%	21%
	2,6,14,16	207	29,145	25,743	(3,401)	-12%	52%
	County Total	260	33,052	30,051	(3,001)	-9%	45%
2. Queens	1,11,12	68	61,256	63,051	1,795	3%	33%
	2,6,14,16	211	19,844	18,539	(1,304)	-7%	59%
	County Total	281	29,718	29,185	(533)	-2%	48%
3. Bronx	1,11,12	62	52,918	47,237	(5,682)	-11%	39%
	2,6,14,16	130	17,457	15,559	(1,898)	-11%	59%
	County Total	231	25,319	22,303	(3,016)	-12%	54%
4. Brooklyn	1,11,12	38	62,125	58,107	(4,018)	-6%	28%
	2,6,14,16	252	18,471	17,359	(1,113)	-6%	62%
	County Total	301	23,703	22,159	(1,544)	-7%	52%
5. Staten Island	1,11,12	19	43,099	42,347	(752)	-2%	32%
	2,6,14,16	59	19,111	14,949	(4,162)	-22%	48%
	County Total	79	24,868	21,573	(3,295)	-13%	42%
6. Nassau	1,11,12	43	60,772	62,750	1,978	3%	20%
	2,6,14,16	165	18,837	20,489	1,653	9%	55%
	County Total	237	25,127	26,946	1,819	7%	42%
7. Suffolk	1,11,12	31	31,056	38,756	7,701	25%	68%
	2,6,14,16	125	14,235	14,301	65	0%	60%
	County Total	179	16,427	17,444	1,016	6%	71%
8. Westchester	1,11,12	71	36,050	38,362	2,311	6%	28%
	2,6,14,16	138	12,209	8,204	(4,005)	-33%	67%
	County Total	222	19,693	17,936	(1,757)	-9%	44%
9. Rockland	1,11,12	24	38,414	42,880	4,466	12%	23%
	2,6,14,16	86	13,862	9,510	(4,352)	-31%	90%
	County Total	114	18,570	16,492	(2,077)	-11%	65%
10. Putnam	1,11,12	10	24,458	34,886	10,428	43%	50%
	2,6,14,16	25	8,656	4,242	(4,414)	-51%	82%
	County Total	60	9,474	8,992	(482)	-5%	77%
NYMTC-10 Region	1,11,12	407	49,952	50,496	544	1%	32%
	2,6,14,16	1,398	18,777	16,986	(1,791)	-10%	60%
	NY-10 Region	1,963	24,359	23,136	(1,224)	-5%	51%
11. Orange	1,11,12	24	23,987	28,000	4,012	17%	41%
	2,6,14,16	58	14,565	10,997	(3,568)	-24%	60%
	7,8,9,17,19	47	6,991	6,447	(544)	-8%	96%
County Total	129	13,466	12,399	(1,067)	-8%	61%	
12. Dutchess	1,11,12	10	19,468	24,389	4,921	25%	37%
	2,6,14,16	36	10,412	9,416	(996)	-10%	49%
	County Total	100	7,624	7,773	149	2%	60%
NYMTC-12 Region							
Total	1,11,12	441	47,867	48,696	829	2%	33%
Network	2,6,14,16	1,492	18,410	16,568	(1,842)	-10%	61%
(NY,NJ,CT)	7,8,9,17,19	258	6,929	6,345	(584)	-8%	109%
NY-12 Region	NY-12 Region	2,191	22,952	21,800	(1,152)	-5%	52%

**BPM RC-55G-5C 050129
DAY**

APPENDIX D: Exhibit D-4-1

Crossings Volumes Report

	EB_DIR	6-10 AM		Model minus Counts		Directional Split		
		Counts	Flow	Diff.	Percent	Counts	Flow	
OUTERBRIDGE CROSSING <i>Middlesex - Richmond</i>	WB Link	38,025	37,366	-659	-2%	50%	50%	0%
	EB Link	38,003	36,901	-1,102	-3%	50%	50%	0%
	Total	76,028	74,267	-1,761	-2%	100%	100%	
GOETHALS BRIDGE <i>Union - Richmond</i>	WB Link	40,965	47,729	6,764	17%	51%	51%	0%
	EB Link	39,757	45,876	6,119	15%	49%	49%	0%
	Total	80,722	93,604	12,882	16%	100%	100%	
BAYONNE BRIDGE <i>Hudson - Richmond</i>	WB Link	9,643	17,842	8,199	85%	45%	51%	6%
	EB Link	11,592	16,852	5,260	45%	55%	49%	-6%
	Total	21,235	34,694	13,459	63%	100%	100%	
Staten Island Bridges (SIBs) - PANYNJ	WB Link	88,633	102,937	14,304	16%	50%	51%	1%
	EB Link	89,352	99,628	10,276	12%	50%	49%	-1%
	Total	177,985	202,565	24,580	14%	100%	100%	
HOLLAND TUNNEL <i>Hudson - New York</i>	WB Link	46,835	38,717	-8,118	-17%	51%	50%	-1%
	EB Link	45,144	38,601	-6,543	-14%	49%	50%	1%
	Total	91,979	77,319	-14,660	-16%	100%	100%	
LINCOLN TUNNEL <i>Hudson - New York</i>	WB Link	60,432	65,274	4,842	8%	51%	51%	0%
	EB Link	58,364	63,934	5,570	10%	49%	49%	0%
	Total	118,796	129,208	10,412	9%	100%	100%	
G WASHINGTON BRIDGE <i>Bergen - New York</i>	WB Link	152,012	134,322	-17,690	-12%	51%	50%	0%
	EB Link	148,783	133,418	-15,365	-10%	49%	50%	0%
	Total	300,795	267,741	-33,055	-11%	100%	100%	
Hudson River Crossings (HRX) -PANYNJ	WB Link	259,279	238,313	-20,966	-8%	51%	50%	0%
	EB Link	252,291	235,954	-16,337	-6%	49%	50%	0%
	Total	511,570	474,267	-37,303	-7%	100%	100%	
TAPPAN ZEE BRIDGE <i>Rockland - Westchester</i>	WB Link	69,559	58,828	-10,731	-15%	50%	51%	0%
	EB Link	68,242	56,704	-11,538	-17%	50%	49%	0%
	Total	137,801	115,532	-22,269	-16%	100%	100%	
MOUNTAIN BRIDGE RD <i>Orange - Westchester</i>	WB Link	9,965	9,085	-880	-9%	54%	46%	-8%
	EB Link	8,418	10,513	2,095	25%	46%	54%	8%
	Total	18,383	19,598	1,215	7%	100%	100%	
NEWBURGH BEACON BRIDGE <i>Orange - Westchester</i>	WB Link	35,053	30,747	-4,306	-12%	50%	51%	1%
	EB Link	34,635	29,351	-5,284	-15%	50%	49%	-1%
	Total	69,688	60,098	-9,590	-14%	100%	100%	
Mid-Hudson Bridges (MHB) <i>Orange - Dutchess</i>	WB Link	114,577	98,660	-15,917	-14%	51%	51%	0%
	EB Link	111,295	96,567	-14,728	-13%	49%	49%	0%
	Total	225,872	195,228	-30,644	-14%	100%	100%	
VERRAZANO BRIDGE <i>Kings - Richmond</i>	WB Link	101,358	101,868	510	1%	48%	50%	3%
	EB Link	111,133	100,081	-11,052	-10%	52%	50%	-3%
	Total	212,491	201,949	-10,542	-5%	100%	100%	
BROOKLYN BATTERY TUNNEL - MTA <i>Kings - New York</i>	WB Link	32,192	43,124	10,932	34%	57%	55%	-1%
	EB Link	24,757	35,191	10,434	42%	43%	45%	1%
	Total	56,949	78,315	21,366	38%	100%	100%	140%
BROOKLYN BRIDGE (F) <i>Kings - New York</i>	WB Link	61,210	38,432	-22,778	-37%	51%	51%	1%
	EB Link	59,935	36,723	-23,212	-39%	49%	49%	-1%
	Total	121,145	75,155	-45,990	-38%	100%	100%	
MANHATTAN BRIDGE (F) <i>Kings - New York</i>	WB Link	30,924	42,241	11,317	37%	47%	49%	2%
	EB Link	35,228	43,546	8,318	24%	53%	51%	-2%
	Total	66,152	85,787	19,635	30%	100%	100%	
WILLIAMSBURG BRIDGE <i>Kings - New York</i>	WB Link	55,013	52,241	-2,772	-5%	53%	45%	-8%
	EB Link	48,351	63,120	14,769	31%	47%	55%	8%
	Total	103,364	115,361	11,997	12%	100%	100%	
QUEENS MIDTOWN TUNNEL -MTA	WB Link	45,334	46,868	1,534	3%	55%	53%	-2%
	EB Link	37,500	41,449	3,949	11%	45%	47%	2%
	Total	82,834	88,317	5,483	7%	100%	100%	
QUEENSBORO BRIDGE (F) <i>Queens - New York</i>	WB Link	88,274	73,053	-15,221	-17%	50%	50%	0%
	EB Link	88,145	72,333	-15,812	-18%	50%	50%	0%
	Total	176,419	145,386	-31,033	-18%	100%	100%	
TRIBOROUGH BRIDGE (West) -MTA <i>Queens - New York</i>	WB Link	50,460	61,813	11,353	22%	53%	50%	-3%
	EB Link	44,299	62,151	17,852	40%	47%	50%	3%
	Total	94,759	123,964	29,205	31%	100%	100%	
East River Crossings (ERX) - NYC & MTA	WB Link	363,407	357,772	-5,635	-2%	52%	50%	-2%
	EB Link	338,215	354,514	16,299	5%	48%	50%	2%
	Total	701,622	712,286	10,664	2%	100%	100%	
TRIBOROUGH BRIDGE (North) <i>Bronx - New York</i>	WB Link	37,366	76,420	39,054	105%	52%	49%	-2%
	EB Link	34,893	78,361	43,468	125%	48%	51%	2%
	Total	72,259	154,780	82,521	114%	100%	100%	
BRONX WHITESTONE BRIDGE <i>Bronx - Queens</i>	WB Link	61,604	53,688	-7,916	-13%	50%	49%	-1%
	EB Link	61,654	56,794	-4,860	-8%	50%	51%	1%
	Total	123,258	110,481	-12,777	-10%	100%	100%	
THROGS NECK BRIDGE <i>Bronx - Queens</i>	WB Link	50,710	58,923	8,213	16%	49%	50%	1%
	EB Link	53,825	59,307	5,482	10%	51%	50%	-1%
	Total	104,535	118,230	13,695	13%	100%	100%	
Bronx Bridges (BB) - MTA	WB Link	149,680	189,030	39,350	26%	50%	49%	-1%
	EB Link	150,372	194,461	44,089	29%	50%	51%	1%
	Total	300,052	383,491	83,439	28%	100%	100%	

	EB_DIR	6-10 AM		Model minus Counts		Directional Split		
		Counts	Flow	Diff.	Percent	Counts	Flow	
WILLIS AVENUE BRIDGE - NB	EB Link	74,954	52,494	-22,460	-30%			
<i>Bronx - New York</i>	Total	74,954	52,494	-22,460	-30%			
3RD AVE BRIDGE - SB	WB Link	74,899	46,979	-27,920	-37%			
<i>Bronx - New York</i>	Total	74,899	46,979	-27,920	-37%			
MADISON AVENUE BRIDGE	2-Way Link	49,487	62,622	13,135	27%			
<i>Bronx - New York</i>	Total	49,487	62,622	13,135	27%			
145TH ST BRIDGE	2-Way Link	35,796	32,462	-3,334	-9%			
<i>Bronx - New York</i>	Total	35,796	32,462	-3,334	-9%			
MACOMBS DAM BRIDGE	2-Way Link	43,442	43,987	545	1%			
<i>Bronx - New York</i>	Total	43,442	43,987	545	1%			
CROSS BRONX EXP BRIDGE	WB Link	83,869	66,684	-17,185	-20%	50%	52%	2%
<i>Bronx - New York</i>	EB Link	84,210	61,300	-22,910	-27%	50%	48%	-2%
	Total	168,079	127,985	-40,094	-24%	100%	100%	
WASHINGTON BRIDGE	WB Link	28,320	19,272	-9,048	-32%	45%	42%	-2%
<i>Bronx - New York</i>	EB Link	35,289	26,153	-9,136	-26%	55%	58%	2%
	Total	63,609	45,425	-18,184	-29%	100%	100%	
W 207TH ST BRIDGE	2-Way Link	45,311	50,892	5,581	12%			
<i>Bronx - New York</i>	Total	45,311	50,892	5,581	12%			
BROADWAY AVE BRIDGE	2-Way Link	23,682	32,354	8,672	37%			
<i>Bronx - New York</i>	Total	23,682	32,354	8,672	37%			
HENRY HUDSON PKY BRIDGE	WB Link	38,135	35,973	-2,162	-6%	54%	48%	-6%
<i>Bronx - New York</i>	EB Link	32,596	39,372	6,776	21%	46%	52%	6%
	Total	70,731	75,345	4,614	7%	100%	100%	0%
Total	WB Link	1,302,157	1,257,490	-44,667	-3%	47%	46%	-1%
	EB Link	1,279,707	1,260,525	-19,182	-1%	46%	46%	0%
	2-Way Link	197,718	222,316	24,598	12%			
	Total	2,779,582	2,740,331	-39,251	-1%			0%

Free and Tolled Facility Summary

1. East River Sector (w/o Verrazano Narrows Bridge)

East River Crossings (ERX) - NYC & MTA	WB Link	180,408	153,726	-26,682	-15%	50%	50%	1%
** Free Bridges **	EB Link	183,308	152,603	-30,705	-17%	50%	50%	-1%
	Total	363,716	306,329	-57,387	-16%	100%	100%	
East River Crossings (ERX) - NYC & MTA	WB Link	182,999	204,046	21,047	12%	54%	50%	-4%
** Tolled Bridges & Tunnels **	EB Link	154,907	201,911	47,004	30%	46%	50%	4%
	Total	337,906	405,957	68,051	20%	100%	100%	
East River Crossings (ERX) - NYC & MTA	WB Link	363,407	357,772	-5,635	-2%	52%	50%	-2%
** All Bridges & Tunnels **	EB Link	338,215	354,514	16,299	5%	48%	50%	2%
	Total	701,622	712,286	10,664	2%	100%	100%	

2. East River Sector with Verrazano Narrows Bridge

East River Crossings (ERX) - NYC & MTA	WB Link	180,408	153,726	-26,682	-15%	50%	50%	1%
** Free Bridges **	EB Link	183,308	152,603	-30,705	-17%	50%	50%	-1%
	Total	363,716	306,329	-57,387	-16%	100%	100%	
East River Crossings (ERX) - NYC & MTA	WB Link	284,357	305,914	21,557	8%	52%	50%	-1%
with Verrazano Narrows Bridge	EB Link	266,040	301,992	35,952	14%	48%	50%	1%
** Tolled Bridges & Tunnels **	Total	550,397	607,906	57,509	10%	100%	100%	
East River Crossings (ERX) - NYC & MTA	WB Link	464,765	459,640	-5,125	-1%	51%	50%	-1%
with Verrazano Narrows Bridge	EB Link	449,348	454,595	5,247	1%	49%	50%	1%
** All Bridges & Tunnels **	Total	914,113	914,235	122	0%	100%	100%	

	EB_DIR	6-10 AM		Model minus Counts		Directional Split		
		Counts	Flow	Diff.	Percent	Counts	Flow	
OUTERBRIDGE CROSSING <i>Middlesex - Richmond</i>	WB Link	8,834	5,787	-3,047	-34%	46%	30%	-17%
	EB Link	10,234	13,818	3,584	35%	54%	70%	17%
	Total	19,068	19,604	536	3%	100%	100%	
GOETHALS BRIDGE <i>Union - Richmond</i>	WB Link	11,367	9,648	-1,719	-15%	60%	45%	-14%
	EB Link	7,673	11,651	3,978	52%	40%	55%	14%
	Total	19,040	21,299	2,259	12%	100%	100%	
BAYONNE BRIDGE <i>Hudson - Richmond</i>	WB Link	3,647	7,362	3,715	102%	65%	77%	12%
	EB Link	1,957	2,213	256	13%	35%	23%	-12%
	Total	5,604	9,575	3,971	71%	100%	100%	
Staten Island Bridges (SIBs) - PANYNJ	WB Link	23,848	22,797	-1,051	-4%	55%	45%	-9%
	EB Link	19,864	27,681	7,817	39%	45%	55%	9%
	Total	43,712	50,478	6,766	15%	100%	100%	
HOLLAND TUNNEL <i>Hudson - New York</i>	WB Link	8,746	4,329	-4,417	-51%	48%	26%	-22%
	EB Link	9,521	12,202	2,681	28%	52%	74%	22%
	Total	18,267	16,531	-1,736	-10%	100%	100%	
LINCOLN TUNNEL <i>Hudson - New York</i>	WB Link	7,973	6,240	-1,733	-22%	30%	24%	-6%
	EB Link	18,453	19,458	1,005	5%	70%	76%	6%
	Total	26,426	25,698	-728	-3%	100%	100%	
G WASHINGTON BRIDGE <i>Bergen - New York</i>	WB Link	30,426	24,397	-6,029	-20%	42%	36%	-5%
	EB Link	42,217	42,474	257	1%	58%	64%	5%
	Total	72,643	66,871	-5,772	-8%	100%	100%	
Hudson River Crossings (HRX) -PANYNJ	WB Link	47,145	34,965	-12,179	-26%	40%	32%	-8%
	EB Link	70,191	74,134	3,943	6%	60%	68%	8%
	Total	117,336	109,099	-8,237	-7%	100%	100%	
TAPPAN ZEE BRIDGE <i>Rockland - Westchester</i>	WB Link	17,947	13,095	-4,852	-27%	44%	42%	-2%
	EB Link	23,210	18,131	-5,079	-22%	56%	58%	2%
	Total	41,157	31,225	-9,932	-24%	100%	100%	
MOUNTAIN BRIDGE RD <i>Orange - Westchester</i>	WB Link	2,918	2,383	-535	-18%	57%	43%	-14%
	EB Link	2,171	3,149	978	45%	43%	57%	14%
	Total	5,089	5,532	443	9%	100%	100%	
NEWBURGH BEACON BRIDGE <i>Orange - Westchester</i>	WB Link	6,968	6,318	-650	-9%	44%	43%	0%
	EB Link	8,921	8,209	-712	-8%	56%	57%	0%
	Total	15,889	14,527	-1,362	-9%	100%	100%	
Mid-Hudson Bridges (MHB) <i>Orange - Dutchess</i>	WB Link	27,833	21,796	-6,037	-22%	45%	43%	-2%
	EB Link	34,302	29,489	-4,813	-14%	55%	57%	2%
	Total	62,135	51,285	-10,850	-17%	100%	100%	
VERRAZANO BRIDGE <i>Kings - Richmond</i>	WB Link	18,283	11,759	-6,524	-36%	36%	23%	-14%
	EB Link	31,975	39,658	7,683	24%	64%	77%	14%
	Total	50,258	51,417	1,159	2%	100%	100%	
BROOKLYN BATTERY TUNNEL - MTA <i>Kings - New York</i>	WB Link	11,064	12,839	1,775	16%	82%	80%	-2%
	EB Link	2,421	3,228	807	33%	18%	20%	2%
	Total	13,485	16,067	2,582	19%	100%	100%	140%
BROOKLYN BRIDGE (F) <i>Kings - New York</i>	WB Link	12,931	10,617	-2,314	-18%	57%	68%	11%
	EB Link	9,648	4,976	-4,672	-48%	43%	32%	-11%
	Total	22,579	15,592	-6,987	-31%	100%	100%	
MANHATTAN BRIDGE (F) <i>Kings - New York</i>	WB Link	8,028	14,188	6,160	77%	60%	72%	12%
	EB Link	5,387	5,555	168	3%	40%	28%	-12%
	Total	13,415	19,743	6,328	47%	100%	100%	
WILLIAMSBURG BRIDGE <i>Kings - New York</i>	WB Link	12,913	14,331	1,418	11%	65%	64%	0%
	EB Link	7,097	8,000	903	13%	35%	36%	0%
	Total	20,010	22,330	2,320	12%	100%	100%	
QUEENS MIDTOWN TUNNEL -MTA	WB Link	14,238	12,785	-1,453	-10%	75%	71%	-4%
	EB Link	4,841	5,343	502	10%	25%	29%	4%
	Total	19,079	18,127	-952	-5%	100%	100%	
QUEENSBORO BRIDGE (F) <i>Queens - New York</i>	WB Link	23,631	20,428	-3,203	-14%	67%	70%	3%
	EB Link	11,736	8,897	-2,839	-24%	33%	30%	-3%
	Total	35,367	29,325	-6,042	-17%	100%	100%	
TRIBOROUGH BRIDGE (West) -MTA <i>Queens - New York</i>	WB Link	14,722	15,579	857	6%	62%	63%	1%
	EB Link	8,964	9,265	301	3%	38%	37%	-1%
	Total	23,686	24,844	1,158	5%	100%	100%	
East River Crossings (ERX) - NYC & MTA	WB Link	97,527	100,766	3,239	3%	66%	69%	3%
	EB Link	50,094	45,262	-4,832	-10%	34%	31%	-3%
	Total	147,621	146,028	-1,593	-1%	100%	100%	
TRIBOROUGH BRIDGE (North) <i>Bronx - New York</i>	WB Link	9,649	13,600	3,951	41%	53%	41%	-12%
	EB Link	8,612	19,393	10,781	125%	47%	59%	12%
	Total	18,261	32,993	14,732	81%	100%	100%	
BRONX WHITESTONE BRIDGE <i>Bronx - Queens</i>	WB Link	18,443	14,293	-4,150	-23%	57%	54%	-3%
	EB Link	14,133	12,288	-1,845	-13%	43%	46%	3%
	Total	32,576	26,580	-5,996	-18%	100%	100%	
THROGS NECK BRIDGE <i>Bronx - Queens</i>	WB Link	14,976	17,043	2,067	14%	57%	64%	6%
	EB Link	11,169	9,736	-1,433	-13%	43%	36%	-6%
	Total	26,145	26,778	633	2%	100%	100%	
Bronx Bridges (BB) - MTA	WB Link	43,068	44,936	1,868	4%	56%	52%	-4%
	EB Link	33,914	41,416	7,502	22%	44%	48%	4%
	Total	76,982	86,352	9,370	12%	100%	100%	

	EB_DIR	6-10 AM		Model minus Counts		Directional Split		
		Counts	Flow	Diff.	Percent	Counts	Flow	
WILLIS AVENUE BRIDGE - NB	EB Link	14,138	5,518	-8,620	-61%			
Bronx - New York	Total	14,138	5,518	-8,620	-61%			
3RD AVE BRIDGE - SB	WB Link	19,078	17,029	-2,049	-11%			
Bronx - New York	Total	19,078	17,029	-2,049	-11%			
MADISON AVENUE BRIDGE	2-Way Link	10,824	12,850	2,026	19%			
Bronx - New York	Total	10,824	12,850	2,026	19%			
145TH ST BRIDGE	2-Way Link	7,875	6,744	-1,131	-14%			
Bronx - New York	Total	7,875	6,744	-1,131	-14%			
MACOMBS DAM BRIDGE	2-Way Link	8,800	10,510	1,710	19%			
Bronx - New York	Total	8,800	10,510	1,710	19%			
CROSS BRONX EXP BRIDGE	WB Link	18,203	14,255	-3,948	-22%	49%	50%	1%
Bronx - New York	EB Link	18,610	14,179	-4,431	-24%	51%	50%	-1%
	Total	36,813	28,434	-8,379	-23%	100%	100%	
WASHINGTON BRIDGE	WB Link	5,824	4,713	-1,111	-19%	48%	52%	4%
Bronx - New York	EB Link	6,403	4,419	-1,984	-31%	52%	48%	-4%
	Total	12,227	9,131	-3,096	-25%	100%	100%	
W 207TH ST BRIDGE	2-Way Link	10,148	11,045	897	9%			
Bronx - New York	Total	10,148	11,045	897	9%			
BROADWAY AVE BRIDGE	2-Way Link	5,392	6,582	1,190	22%			
Bronx - New York	Total	5,392	6,582	1,190	22%			
HENRY HUDSON PKY BRIDGE	WB Link	12,869	11,891	-978	-8%	72%	68%	-4%
Bronx - New York	EB Link	4,950	5,472	522	11%	28%	32%	4%
	Total	17,819	17,363	-456	-3%	100%	100%	0%
Total	WB Link	313,678	284,906	-28,771	-9%	49%	46%	-3%
	EB Link	284,441	287,228	2,787	1%	44%	46%	2%
	2-Way Link	43,039	47,731	4,692	11%			
	Total	641,158	619,865	-21,292	-3%			0%

Free and Tolled Facility Summary

1. East River Sector (w/o Verrazano Narrows Bridge)

East River Crossings (ERX) - NYC & MTA	WB Link	44,590	45,232	642	1%	62%	70%	7%
** Free Bridges **	EB Link	26,771	19,427	-7,344	-27%	38%	30%	-7%
	Total	71,361	64,660	-6,701	-9%	100%	100%	
East River Crossings (ERX) - NYC & MTA	WB Link	52,937	55,534	2,597	5%	69%	68%	-1%
** Tolled Bridges & Tunnels **	EB Link	23,323	25,835	2,512	11%	31%	32%	1%
	Total	76,260	81,368	5,108	7%	100%	100%	
East River Crossings (ERX) - NYC & MTA	WB Link	97,527	100,766	3,239	3%	66%	69%	3%
** All Bridges & Tunnels **	EB Link	50,094	45,262	-4,832	-10%	34%	31%	-3%
	Total	147,621	146,028	-1,593	-1%	100%	100%	

2. East River Sector with Verrazano Narrows Bridge

East River Crossings (ERX) - NYC & MTA	WB Link	44,590	45,232	642	1%	62%	70%	7%
** Free Bridges **	EB Link	26,771	19,427	-7,344	-27%	38%	30%	-7%
	Total	71,361	64,660	-6,701	-9%	100%	100%	
East River Crossings (ERX) - NYC & MTA	WB Link	71,220	67,293	-3,927	-6%	56%	51%	-6%
with Verrazano Narrows Bridge	EB Link	55,298	65,493	10,195	18%	44%	49%	6%
** Tolled Bridges & Tunnels **	Total	126,518	132,786	6,268	5%	100%	100%	
East River Crossings (ERX) - NYC & MTA	WB Link	115,810	112,525	-3,285	-3%	59%	57%	-2%
with Verrazano Narrows Bridge	EB Link	82,069	84,920	2,851	3%	41%	43%	2%
** All Bridges & Tunnels **	Total	197,879	197,445	-434	0%	100%	100%	

**BPM RC-55G-5C 050129
MD**

APPENDIX D: Exhibit D-4-3

Crossings Volumes Report

	EB_DIR	10 am - 4 pm		Model minus Counts		Directional Split		
		Counts	Flow	Diff.	Percent	Counts	Flow	
OUTERBRIDGE CROSSING <i>Middlesex - Richmond</i>	WB Link	13,177	12,288	-889	-7%	55%	52%	-3%
	EB Link	10,967	11,508	541	5%	45%	48%	3%
	Total	24,144	23,795	-349	-1%	100%	100%	
GOETHALS BRIDGE <i>Union - Richmond</i>	WB Link	14,313	14,043	-270	-2%	55%	51%	-5%
	EB Link	11,550	13,700	2,150	19%	45%	49%	5%
	Total	25,863	27,744	1,881	7%	100%	100%	
BAYONNE BRIDGE <i>Hudson - Richmond</i>	WB Link	2,863	5,599	2,736	96%	47%	50%	2%
	EB Link	3,177	5,632	2,455	77%	53%	50%	-2%
	Total	6,040	11,232	5,192	86%	100%	100%	
Staten Island Bridges (SIBs) - PANYNJ	WB Link	30,353	31,931	1,578	5%	54%	51%	-3%
	EB Link	25,694	30,840	5,146	20%	46%	49%	3%
	Total	56,047	62,771	6,724	12%	100%	100%	
HOLLAND TUNNEL <i>Hudson - New York</i>	WB Link	11,548	9,337	-2,211	-19%	47%	41%	-6%
	EB Link	13,156	13,390	234	2%	53%	59%	6%
	Total	24,704	22,727	-1,977	-8%	100%	100%	
LINCOLN TUNNEL <i>Hudson - New York</i>	WB Link	16,748	15,653	-1,095	-7%	48%	41%	-7%
	EB Link	17,848	22,300	4,452	25%	52%	59%	7%
	Total	34,596	37,953	3,358	10%	100%	100%	
G WASHINGTON BRIDGE <i>Bergen - New York</i>	WB Link	44,844	34,287	-10,557	-24%	52%	46%	-6%
	EB Link	41,455	40,960	-495	-1%	48%	54%	6%
	Total	86,299	75,247	-11,052	-13%	100%	100%	
Hudson River Crossings (HRX) -PANYNJ	WB Link	73,139	59,276	-13,863	-19%	50%	44%	-7%
	EB Link	72,459	76,651	4,192	6%	50%	56%	7%
	Total	145,598	135,927	-9,671	-7%	100%	100%	
TAPPAN ZEE BRIDGE <i>Rockland - Westchester</i>	WB Link	23,092	17,378	-5,714	-25%	55%	51%	-4%
	EB Link	18,742	16,840	-1,902	-10%	45%	49%	4%
	Total	41,834	34,217	-7,617	-18%	100%	100%	
MOUNTAIN BRIDGE RD <i>Orange - Westchester</i>	WB Link	2,824	2,955	131	5%	50%	49%	-1%
	EB Link	2,795	3,097	302	11%	50%	51%	1%
	Total	5,619	6,052	433	8%	100%	100%	
NEWBURGH BEACON BRIDGE <i>Orange - Westchester</i>	WB Link	11,709	10,157	-1,552	-13%	50%	53%	2%
	EB Link	11,499	9,032	-2,467	-21%	50%	47%	-2%
	Total	23,208	19,189	-4,019	-17%	100%	100%	
Mid-Hudson Bridges (MHB) <i>Orange - Dutchess</i>	WB Link	37,625	30,490	-7,135	-19%	53%	51%	-2%
	EB Link	33,036	28,969	-4,067	-12%	47%	49%	2%
	Total	70,661	59,459	-11,202	-16%	100%	100%	
VERRAZANO BRIDGE <i>Kings - Richmond</i>	WB Link	31,498	29,556	-1,942	-6%	51%	50%	-1%
	EB Link	30,782	29,824	-958	-3%	49%	50%	1%
	Total	62,280	59,380	-2,900	-5%	100%	100%	
BROOKLYN BATTERY TUNNEL - MTA <i>Kings - New York</i>	WB Link	9,750	16,461	6,711	69%	58%	60%	1%
	EB Link	6,957	11,152	4,195	60%	42%	40%	-1%
	Total	16,707	27,613	10,906	65%	100%	100%	140%
BROOKLYN BRIDGE (F) <i>Kings - New York</i>	WB Link	17,702	15,547	-2,155	-12%	53%	67%	14%
	EB Link	15,533	7,486	-8,047	-52%	47%	33%	-14%
	Total	33,235	23,033	-10,202	-31%	100%	100%	
MANHATTAN BRIDGE (F) <i>Kings - New York</i>	WB Link	8,637	14,042	5,405	63%	48%	61%	13%
	EB Link	9,262	8,930	-332	-4%	52%	39%	-13%
	Total	17,899	22,972	5,073	28%	100%	100%	
WILLIAMSBURG BRIDGE <i>Kings - New York</i>	WB Link	16,308	19,105	2,797	17%	56%	53%	-3%
	EB Link	12,867	16,943	4,076	32%	44%	47%	3%
	Total	29,175	36,048	6,873	24%	100%	100%	
QUEENS MIDTOWN TUNNEL -MTA	WB Link	14,299	16,144	1,845	13%	54%	56%	2%
	EB Link	12,062	12,523	461	4%	46%	44%	-2%
	Total	26,361	28,666	2,305	9%	100%	100%	
QUEENSBORO BRIDGE (F) <i>Queens - New York</i>	WB Link	23,312	28,351	5,039	22%	50%	61%	11%
	EB Link	23,098	18,039	-5,059	-22%	50%	39%	-11%
	Total	46,410	46,389	-21	0%	100%	100%	
TRIBOROUGH BRIDGE (West) -MTA <i>Queens - New York</i>	WB Link	16,473	20,745	4,272	26%	53%	55%	2%
	EB Link	14,677	16,955	2,278	16%	47%	45%	-2%
	Total	31,150	37,700	6,550	21%	100%	100%	
East River Crossings (ERX) - NYC & MTA	WB Link	106,481	130,394	23,913	22%	53%	59%	6%
	EB Link	94,456	92,027	-2,429	-3%	47%	41%	-6%
	Total	200,937	222,421	21,484	11%	100%	100%	
TRIBOROUGH BRIDGE (North) <i>Bronx - New York</i>	WB Link	10,895	23,045	12,150	112%	51%	49%	-2%
	EB Link	10,646	23,945	13,299	125%	49%	51%	2%
	Total	21,541	46,990	25,449	118%	100%	100%	
BRONX WHITESTONE BRIDGE <i>Bronx - Queens</i>	WB Link	17,571	17,616	45	0%	49%	52%	3%
	EB Link	18,593	16,277	-2,316	-12%	51%	48%	-3%
	Total	36,164	33,892	-2,272	-6%	100%	100%	
THROGS NECK BRIDGE <i>Bronx - Queens</i>	WB Link	15,093	20,085	4,992	33%	48%	54%	6%
	EB Link	16,515	16,987	472	3%	52%	46%	-6%
	Total	31,608	37,072	5,464	17%	100%	100%	
Bronx Bridges (BB) - MTA	WB Link	43,559	60,746	17,187	39%	49%	51%	3%
	EB Link	45,754	57,209	11,455	25%	51%	49%	-3%
	Total	89,313	117,954	28,641	32%	100%	100%	

	EB_DIR	10 am - 4 pm		Model minus Counts		Directional Split		
		Counts	Flow	Diff.	Percent	Counts	Flow	
WILLIS AVENUE BRIDGE - NB	EB Link	20,783	12,305	-8,478	-41%			
Bronx - New York	Total	20,783	12,305	-8,478	-41%			
3RD AVE BRIDGE - SB	WB Link	20,947	17,696	-3,251	-16%			
Bronx - New York	Total	20,947	17,696	-3,251	-16%			
MADISON AVENUE BRIDGE	2-Way Link	14,785	19,102	4,317	29%			
Bronx - New York	Total	14,785	19,102	4,317	29%			
145TH ST BRIDGE	2-Way Link	11,220	10,976	-244	-2%			
Bronx - New York	Total	11,220	10,976	-244	-2%			
MACOMBS DAM BRIDGE	2-Way Link	13,777	14,239	462	3%			
Bronx - New York	Total	13,777	14,239	462	3%			
CROSS BRONX EXP BRIDGE	WB Link	24,530	19,944	-4,586	-19%	50%	52%	3%
Bronx - New York	EB Link	24,955	18,111	-6,844	-27%	50%	48%	-3%
	Total	49,485	38,055	-11,430	-23%	100%	100%	
WASHINGTON BRIDGE	WB Link	9,154	6,460	-2,694	-29%	49%	47%	-2%
Bronx - New York	EB Link	9,672	7,285	-2,387	-25%	51%	53%	2%
	Total	18,826	13,745	-5,081	-27%	100%	100%	
W 207TH ST BRIDGE	2-Way Link	14,049	15,346	1,297	9%			
Bronx - New York	Total	14,049	15,346	1,297	9%			
BROADWAY AVE BRIDGE	2-Way Link	7,925	10,638	2,713	34%			
Bronx - New York	Total	7,925	10,638	2,713	34%			
HENRY HUDSON PKY BRIDGE	WB Link	11,254	13,283	2,029	18%	57%	54%	-2%
Bronx - New York	EB Link	8,628	11,233	2,605	30%	43%	46%	2%
	Total	19,882	24,516	4,634	23%	100%	100%	0%
Total	WB Link	388,540	399,776	11,236	3%	48%	48%	0%
	EB Link	366,219	364,452	-1,767	0%	45%	44%	-1%
	2-Way Link	61,756	70,301	8,545	14%			
	Total	816,515	834,529	18,014	2%			0%

Free and Tolled Facility Summary

1. East River Sector (w/o Verrazano Narrows Bridge)

East River Crossings (ERX) - NYC & MTA	WB Link	49,651	57,939	8,288	17%	51%	63%	12%
** Free Bridges **	EB Link	47,893	34,455	-13,438	-28%	49%	37%	-12%
	Total	97,544	92,394	-5,150	-5%	100%	100%	
East River Crossings (ERX) - NYC & MTA	WB Link	56,830	72,455	15,625	27%	55%	56%	1%
** Tolled Bridges & Tunnels **	EB Link	46,563	57,572	11,009	24%	45%	44%	-1%
	Total	103,393	130,027	26,634	26%	100%	100%	
East River Crossings (ERX) - NYC & MTA	WB Link	106,481	130,394	23,913	22%	53%	59%	6%
** All Bridges & Tunnels **	EB Link	94,456	92,027	-2,429	-3%	47%	41%	-6%
	Total	200,937	222,421	21,484	11%	100%	100%	

2. East River Sector with Verrazano Narrows Bridge

East River Crossings (ERX) - NYC & MTA	WB Link	49,651	57,939	8,288	17%	51%	63%	12%
** Free Bridges **	EB Link	47,893	34,455	-13,438	-28%	49%	37%	-12%
	Total	97,544	92,394	-5,150	-5%	100%	100%	
East River Crossings (ERX) - NYC & MTA	WB Link	88,328	102,011	13,683	15%	53%	54%	1%
with Verrazano Narrows Bridge	EB Link	77,345	87,396	10,051	13%	47%	46%	-1%
** Tolled Bridges & Tunnels **	Total	165,673	189,407	23,734	14%	100%	100%	
East River Crossings (ERX) - NYC & MTA	WB Link	137,979	159,951	21,972	16%	52%	57%	4%
with Verrazano Narrows Bridge	EB Link	125,238	121,850	-3,388	-3%	48%	43%	-4%
** All Bridges & Tunnels **	Total	263,217	281,801	18,584	7%	100%	100%	

	EB_DIR	4 - 8 pm		Model minus Counts		Directional Split		
		Counts	Flow	Diff.	Percent	Counts	Flow	
OUTERBRIDGE CROSSING <i>Middlesex - Richmond</i>	WB Link	9,892	13,880	3,988	40%	51%	69%	18%
	EB Link	9,672	6,340	-3,332	-34%	49%	31%	-18%
	Total	19,564	20,221	657	3%	100%	100%	
GOETHALS BRIDGE <i>Union - Richmond</i>	WB Link	8,697	12,960	4,263	49%	44%	56%	12%
	EB Link	10,966	10,208	-758	-7%	56%	44%	-12%
	Total	19,663	23,168	3,505	18%	100%	100%	
BAYONNE BRIDGE <i>Hudson - Richmond</i>	WB Link	1,773	3,269	1,496	84%	29%	31%	3%
	EB Link	4,419	7,132	2,713	61%	71%	69%	-3%
	Total	6,192	10,401	4,209	68%	100%	100%	
Staten Island Bridges (SIBs) - PANYNJ	WB Link	20,362	30,109	9,747	48%	45%	56%	11%
	EB Link	25,057	23,680	-1,377	-5%	55%	44%	-11%
	Total	45,419	53,790	8,371	18%	100%	100%	
HOLLAND TUNNEL <i>Hudson - New York</i>	WB Link	12,527	12,969	442	4%	53%	70%	17%
	EB Link	10,971	5,445	-5,526	-50%	47%	30%	-17%
	Total	23,498	18,414	-5,084	-22%	100%	100%	
LINCOLN TUNNEL <i>Hudson - New York</i>	WB Link	18,226	22,405	4,180	23%	66%	74%	8%
	EB Link	9,432	7,828	-1,604	-17%	34%	26%	-8%
	Total	27,658	30,234	2,576	9%	100%	100%	
G WASHINGTON BRIDGE <i>Bergen - New York</i>	WB Link	41,419	42,738	1,319	3%	54%	62%	8%
	EB Link	35,350	25,970	-9,380	-27%	46%	38%	-8%
	Total	76,769	68,708	-8,061	-11%	100%	100%	
Hudson River Crossings (HRX) -PANYNJ	WB Link	72,172	78,112	5,940	8%	56%	67%	10%
	EB Link	55,753	39,244	-16,509	-30%	44%	33%	-10%
	Total	127,925	117,356	-10,569	-8%	100%	100%	
TAPPAN ZEE BRIDGE <i>Rockland - Westchester</i>	WB Link	16,764	16,958	194	1%	53%	58%	5%
	EB Link	15,129	12,365	-2,764	-18%	47%	42%	-5%
	Total	31,893	29,323	-2,570	-8%	100%	100%	
MOUNTAIN BRIDGE RD <i>Orange - Westchester</i>	WB Link	1,927	2,336	409	21%	49%	49%	1%
	EB Link	2,029	2,399	370	18%	51%	51%	-1%
	Total	3,956	4,735	779	20%	100%	100%	
NEWBURGH BEACON BRIDGE <i>Orange - Westchester</i>	WB Link	9,896	8,475	-1,421	-14%	54%	56%	2%
	EB Link	8,362	6,678	-1,684	-20%	46%	44%	-2%
	Total	18,258	15,153	-3,105	-17%	100%	100%	
Mid-Hudson Bridges (MHB) <i>Orange - Dutchess</i>	WB Link	30,158	40,950	10,792	36%	54%	72%	18%
	EB Link	25,225	15,875	-9,350	-37%	46%	28%	-18%
	Total	55,383	56,824	1,441	3%	100%	100%	
VERRAZANO BRIDGE <i>Kings - Richmond</i>	WB Link	30,158	40,950	10,792	36%	54%	72%	18%
	EB Link	25,225	15,875	-9,350	-37%	46%	28%	-18%
	Total	55,383	56,824	1,441	3%	100%	100%	
BROOKLYN BATTERY TUNNEL - MTA <i>Kings - New York</i>	WB Link	6,599	8,695	2,096	32%	43%	39%	-4%
	EB Link	8,862	13,719	4,857	55%	57%	61%	4%
	Total	15,461	22,414	6,953	45%	100%	100%	140%
BROOKLYN BRIDGE (F) <i>Kings - New York</i>	WB Link	12,142	6,418	-5,724	-47%	47%	34%	-13%
	EB Link	13,555	12,470	-1,085	-8%	53%	66%	13%
	Total	25,697	18,888	-6,809	-26%	100%	100%	
MANHATTAN BRIDGE (F) <i>Kings - New York</i>	WB Link	5,548	8,485	2,937	53%	38%	36%	-2%
	EB Link	8,882	15,006	6,124	70%	62%	64%	2%
	Total	14,430	23,491	9,061	63%	100%	100%	
WILLIAMSBURG BRIDGE <i>Kings - New York</i>	WB Link	10,848	9,751	-1,097	-10%	47%	31%	-16%
	EB Link	12,336	22,193	9,857	80%	53%	69%	16%
	Total	23,184	31,944	8,760	38%	100%	100%	
QUEENS MIDTOWN TUNNEL -MTA	WB Link	10,296	10,007	-289	-3%	49%	40%	-9%
	EB Link	10,665	15,120	4,455	42%	51%	60%	9%
	Total	20,961	25,127	4,166	20%	100%	100%	
QUEENSBORO BRIDGE (F) <i>Queens - New York</i>	WB Link	16,930	13,859	-3,071	-18%	44%	37%	-7%
	EB Link	21,846	24,083	2,237	10%	56%	63%	7%
	Total	38,776	37,942	-834	-2%	100%	100%	
TRIBOROUGH BRIDGE (West) -MTA <i>Queens - New York</i>	WB Link	11,905	12,621	716	6%	52%	42%	-10%
	EB Link	11,209	17,664	6,455	58%	48%	58%	10%
	Total	23,114	30,285	7,171	31%	100%	100%	
East River Crossings (ERX) - NYC & MTA	WB Link	74,268	69,837	-4,431	-6%	46%	37%	-9%
	EB Link	87,355	120,254	32,899	38%	54%	63%	9%
	Total	161,623	190,090	28,467	18%	100%	100%	
TRIBOROUGH BRIDGE (North) <i>Bronx - New York</i>	WB Link	8,750	22,691	13,941	159%	51%	56%	5%
	EB Link	8,321	17,691	9,370	113%	49%	44%	-5%
	Total	17,071	40,382	23,311	137%	100%	100%	
BRONX WHITESTONE BRIDGE <i>Bronx - Queens</i>	WB Link	13,775	13,658	-117	-1%	45%	45%	0%
	EB Link	16,937	16,710	-227	-1%	55%	55%	0%
	Total	30,712	30,368	-344	-1%	100%	100%	
THROGS NECK BRIDGE <i>Bronx - Queens</i>	WB Link	11,063	12,146	1,083	10%	42%	40%	-2%
	EB Link	15,336	18,221	2,885	19%	58%	60%	2%
	Total	26,399	30,368	3,969	15%	100%	100%	
Bronx Bridges (BB) - MTA	WB Link	33,588	48,495	14,907	44%	45%	48%	3%
	EB Link	40,594	52,621	12,027	30%	55%	52%	-3%
	Total	74,182	101,117	26,935	36%	100%	100%	

	EB_DIR	4 - 8 pm		Model minus Counts		Directional Split		
		Counts	Flow	Diff.	Percent	Counts	Flow	
WILLIS AVENUE BRIDGE - NB	EB Link	18,858	21,489	2,631	14%			
Bronx - New York	Total	18,858	21,489	2,631	14%			
3RD AVE BRIDGE - SB	WB Link	15,623	5,892	-9,731	-62%			
Bronx - New York	Total	15,623	5,892	-9,731	-62%			
MADISON AVENUE BRIDGE	2-Way Link	13,018	17,369	4,351	33%			
Bronx - New York	Total	13,018	17,369	4,351	33%			
145TH ST BRIDGE	2-Way Link	8,380	8,757	377	4%			
Bronx - New York	Total	8,380	8,757	377	4%			
MACOMBS DAM BRIDGE	2-Way Link	8,380	8,757	377	4%			
Bronx - New York	Total	8,380	8,757	377	4%			
CROSS BRONX EXP BRIDGE	WB Link	16,733	15,954	-779	-5%	49%	53%	4%
Bronx - New York	EB Link	17,327	14,043	-3,284	-19%	51%	47%	-4%
	Total	34,060	29,997	-4,063	-12%	100%	100%	
WASHINGTON BRIDGE	WB Link	6,849	4,124	-2,725	-40%	42%	35%	-7%
Bronx - New York	EB Link	9,590	7,696	-1,894	-20%	58%	65%	7%
	Total	16,439	11,820	-4,619	-28%	100%	100%	
W 207TH ST BRIDGE	2-Way Link	10,533	14,170	3,637	35%			
Bronx - New York	Total	10,533	14,170	3,637	35%			
BROADWAY AVE BRIDGE	2-Way Link	6,192	8,732	2,540	41%			
Bronx - New York	Total	6,192	8,732	2,540	41%			
HENRY HUDSON PKY BRIDGE	WB Link	9,938	6,531	-3,407	-34%	48%	33%	-14%
Bronx - New York	EB Link	10,980	13,111	2,131	19%	52%	67%	14%
	Total	20,918	19,642	-1,276	-6%	100%	100%	0%
Total	WB Link	308,278	327,774	19,496	6%	46%	46%	0%
	EB Link	316,259	329,455	13,196	4%	47%	46%	-1%
	2-Way Link	48,093	60,186	12,093	25%			
	Total	672,630	717,415	44,785	7%			0%

Free and Tolloed Facility Summary

1. East River Sector (w/o Verrazano Narrows Bridge)

East River Crossings (ERX) - NYC & MTA	WB Link	34,620	28,762	-5,858	-17%	44%	36%	-8%
** Free Bridges **	EB Link	44,283	51,558	7,275	16%	56%	64%	8%
	Total	78,903	80,320	1,417	2%	100%	100%	
East River Crossings (ERX) - NYC & MTA	WB Link	39,648	41,075	1,427	4%	48%	37%	-11%
** Tolloed Bridges & Tunnels **	EB Link	43,072	68,695	25,623	59%	52%	63%	11%
	Total	82,720	109,770	27,050	33%	100%	100%	
East River Crossings (ERX) - NYC & MTA	WB Link	74,268	69,837	-4,431	-6%	46%	37%	-9%
** All Bridges & Tunnels **	EB Link	87,355	120,254	32,899	38%	54%	63%	9%
	Total	161,623	190,090	28,467	18%	100%	100%	

2. East River Sector with Verrazano Narrows Bridge

East River Crossings (ERX) - NYC & MTA	WB Link	34,620	28,762	-5,858	-17%	44%	36%	-8%
** Free Bridges **	EB Link	44,283	51,558	7,275	16%	56%	64%	8%
	Total	78,903	80,320	1,417	2%	100%	100%	
East River Crossings (ERX) - NYC & MTA	WB Link	69,806	82,024	12,218	18%	51%	49%	-1%
with Verrazano Narrows Bridge	EB Link	68,297	84,570	16,273	24%	49%	51%	1%
** Tolloed Bridges & Tunnels **	Total	138,103	166,594	28,491	21%	100%	100%	
East River Crossings (ERX) - NYC & MTA	WB Link	104,426	110,786	6,360	6%	48%	45%	-3%
with Verrazano Narrows Bridge	EB Link	112,580	136,128	23,548	21%	52%	55%	3%
** All Bridges & Tunnels **	Total	217,006	246,915	29,909	14%	100%	100%	

	EB_DIR	Other Hours		Model minus Counts		Directional Split		
		Counts	Flow	Diff.	Percent	Counts	Flow	
OUTERBRIDGE CROSSING <i>Middlesex - Richmond</i>	WB Link	6,122	5,412	-710	-12%	46%	51%	5%
	EB Link	7,130	5,235	-1,895	-27%	54%	49%	-5%
	Total	13,252	10,647	-2,605	-20%	100%	100%	
GOETHALS BRIDGE <i>Union - Richmond</i>	WB Link	6,588	11,077	4,489	68%	41%	52%	11%
	EB Link	9,568	10,317	749	8%	59%	48%	-11%
	Total	16,156	21,394	5,238	32%	100%	100%	
BAYONNE BRIDGE <i>Hudson - Richmond</i>	WB Link	1,360	1,611	251	18%	40%	46%	6%
	EB Link	2,039	1,875	-164	-8%	60%	54%	-6%
	Total	3,399	3,486	87	3%	100%	100%	
Staten Island Bridges (SIBs) - PANYNJ	WB Link	14,070	18,100	4,030	29%	43%	51%	8%
	EB Link	18,737	17,427	-1,310	-7%	57%	49%	-8%
	Total	32,807	35,527	2,720	8%	100%	100%	
HOLLAND TUNNEL <i>Hudson - New York</i>	WB Link	14,014	12,083	-1,931	-14%	55%	61%	7%
	EB Link	11,496	7,565	-3,931	-34%	45%	39%	-7%
	Total	25,510	19,648	-5,862	-23%	100%	100%	
LINCOLN TUNNEL <i>Hudson - New York</i>	WB Link	17,485	20,975	3,490	20%	58%	59%	1%
	EB Link	12,631	14,348	1,717	14%	42%	41%	-1%
	Total	30,116	35,323	5,207	17%	100%	100%	
G WASHINGTON BRIDGE <i>Bergen - New York</i>	WB Link	35,324	32,901	-2,423	-7%	54%	58%	4%
	EB Link	29,761	24,013	-5,748	-19%	46%	42%	-4%
	Total	65,085	56,915	-8,170	-13%	100%	100%	
Hudson River Crossings (HRX) -PANYNJ	WB Link	66,823	65,960	-863	-1%	55%	59%	4%
	EB Link	53,888	45,926	-7,962	-15%	45%	41%	-4%
	Total	120,711	111,886	-8,826	-7%	100%	100%	
TAPPAN ZEE BRIDGE <i>Rockland - Westchester</i>	WB Link	11,756	11,397	-359	-3%	51%	55%	4%
	EB Link	11,161	9,369	-1,792	-16%	49%	45%	-4%
	Total	22,917	20,766	-2,151	-9%	100%	100%	
MOUNTAIN BRIDGE RD <i>Orange - Westchester</i>	WB Link	2,296	1,411	-885	-39%	62%	43%	-19%
	EB Link	1,423	1,868	445	31%	38%	57%	19%
	Total	3,719	3,279	-440	-12%	100%	100%	
NEWBURGH BEACON BRIDGE <i>Orange - Westchester</i>	WB Link	6,480	5,796	-684	-11%	53%	52%	-1%
	EB Link	5,853	5,432	-421	-7%	47%	48%	1%
	Total	12,333	11,228	-1,105	-9%	100%	100%	
Mid-Hudson Bridges (MHB)	WB Link	20,532	18,604	-1,928	-9%	53%	53%	0%
	EB Link	18,437	16,668	-1,769	-10%	47%	47%	0%
	Total	38,969	35,273	-3,696	-9%	100%	100%	
VERRAZANO BRIDGE <i>Kings - Richmond</i>	WB Link	21,419	19,603	-1,816	-8%	48%	57%	9%
	EB Link	23,151	14,725	-8,426	-36%	52%	43%	-9%
	Total	44,570	34,327	-10,243	-23%	100%	100%	
BROOKLYN BATTERY TUNNEL - MTA <i>Kings - New York</i>	WB Link	4,779	5,128	349	7%	42%	42%	0%
	EB Link	6,517	7,093	576	9%	58%	58%	0%
	Total	11,296	12,221	925	8%	100%	100%	140%
BROOKLYN BRIDGE (F) <i>Kings - New York</i>	WB Link	18,435	5,850	-12,585	-68%	47%	33%	-13%
	EB Link	21,199	11,792	-9,407	-44%	53%	67%	13%
	Total	39,634	17,642	-21,992	-55%	100%	100%	
MANHATTAN BRIDGE (F) <i>Kings - New York</i>	WB Link	8,711	5,527	-3,184	-37%	43%	28%	-14%
	EB Link	11,697	14,055	2,358	20%	57%	72%	14%
	Total	20,408	19,582	-826	-4%	100%	100%	
WILLIAMSBURG BRIDGE <i>Kings - New York</i>	WB Link	14,944	9,055	-5,889	-39%	48%	36%	-12%
	EB Link	16,051	15,984	-67	0%	52%	64%	12%
	Total	30,995	25,039	-5,956	-19%	100%	100%	
QUEENS MIDTOWN TUNNEL -MTA	WB Link	6,501	7,933	1,432	22%	40%	48%	9%
	EB Link	9,932	8,464	-1,468	-15%	60%	52%	-9%
	Total	16,433	16,397	-36	0%	100%	100%	
QUEENSBORO BRIDGE (F) <i>Queens - New York</i>	WB Link	24,401	10,415	-13,986	-57%	44%	33%	-11%
	EB Link	31,465	21,315	-10,150	-32%	56%	67%	11%
	Total	55,866	31,731	-24,135	-43%	100%	100%	
TRIBOROUGH BRIDGE (West) -MTA <i>Queens - New York</i>	WB Link	7,360	12,867	5,507	75%	44%	41%	-2%
	EB Link	9,449	18,268	8,819	93%	56%	59%	2%
	Total	16,809	31,135	14,326	85%	100%	100%	
East River Crossings (ERX) - NYC & MTA	WB Link	85,131	56,775	-28,356	-33%	44%	37%	-8%
	EB Link	106,310	96,971	-9,339	-9%	56%	63%	8%
	Total	191,441	153,746	-37,695	-20%	100%	100%	
TRIBOROUGH BRIDGE (North) <i>Bronx - New York</i>	WB Link	8,072	17,084	9,012	112%	52%	50%	-3%
	EB Link	7,314	17,332	10,018	137%	48%	50%	3%
	Total	15,386	34,416	19,030	124%	100%	100%	
BRONX WHITESTONE BRIDGE <i>Bronx - Queens</i>	WB Link	11,815	8,121	-3,694	-31%	50%	41%	-8%
	EB Link	11,991	11,520	-471	-4%	50%	59%	8%
	Total	23,806	19,641	-4,165	-17%	100%	100%	
THROGS NECK BRIDGE <i>Bronx - Queens</i>	WB Link	9,578	9,648	70	1%	47%	40%	-7%
	EB Link	10,805	14,363	3,558	33%	53%	60%	7%
	Total	20,383	24,012	3,629	18%	100%	100%	
Bronx Bridges (BB) - MTA	WB Link	29,465	34,854	5,389	18%	49%	45%	-5%
	EB Link	30,110	43,215	13,105	44%	51%	55%	5%
	Total	59,575	78,068	18,493	31%	100%	100%	

	EB_DIR	Other Hours		Model minus Counts		Directional Split		
		Counts	Flow	Diff.	Percent	Counts	Flow	
WILLIS AVENUE BRIDGE - NB	EB Link	21,175	13,182	-7,993	-38%			
<i>Bronx - New York</i>	Total	21,175	13,182	-7,993	-38%			
3RD AVE BRIDGE - SB	WB Link	19,251	6,362	-12,889	-67%			
<i>Bronx - New York</i>	Total	19,251	6,362	-12,889	-67%			
MADISON AVENUE BRIDGE	2-Way Link	10,860	13,300	2,440	22%			
<i>Bronx - New York</i>	Total	10,860	13,300	2,440	22%			
145TH ST BRIDGE	2-Way Link	8,321	5,986	-2,335	-28%			
<i>Bronx - New York</i>	Total	8,321	5,986	-2,335	-28%			
MACOMBS DAM BRIDGE	2-Way Link	10,895	8,079	-2,816	-26%			
<i>Bronx - New York</i>	Total	10,895	8,079	-2,816	-26%			
CROSS BRONX EXP BRIDGE	WB Link	24,403	16,532	-7,871	-32%	51%	52%	1%
<i>Bronx - New York</i>	EB Link	23,318	14,967	-8,351	-36%	49%	48%	-1%
	Total	47,721	31,498	-16,223	-34%	100%	100%	
WASHINGTON BRIDGE	WB Link	6,493	3,975	-2,518	-39%	40%	37%	-3%
<i>Bronx - New York</i>	EB Link	9,624	6,754	-2,870	-30%	60%	63%	3%
	Total	16,117	10,729	-5,388	-33%	100%	100%	
W 207TH ST BRIDGE	2-Way Link	10,581	10,331	-250	-2%			
<i>Bronx - New York</i>	Total	10,581	10,331	-250	-2%			
BROADWAY AVE BRIDGE	2-Way Link	4,173	6,402	2,229	53%			
<i>Bronx - New York</i>	Total	4,173	6,402	2,229	53%			
HENRY HUDSON PKY BRIDGE	WB Link	4,074	4,269	195	5%	34%	31%	-3%
<i>Bronx - New York</i>	EB Link	8,038	9,556	1,518	19%	66%	69%	3%
	Total	12,112	13,825	1,713	14%	100%	100%	0%
Total	WB Link	291,661	245,034	-46,627	-16%	45%	43%	-2%
	EB Link	312,788	279,390	-33,398	-11%	48%	49%	1%
	2-Way Link	44,830	44,097	-733	-2%			
	Total	649,279	568,521	-80,758	-12%			0%

Free and Tolled Facility Summary

1. East River Sector (w/o Verrazano Narrows Bridge)

East River Crossings (ERX) - NYC & MTA	WB Link	51,547	21,792	-29,755	-58%	44%	32%	-13%
** Free Bridges **	EB Link	64,361	47,162	-17,199	-27%	56%	68%	13%
	Total	115,908	68,955	-46,953	-41%	100%	100%	
East River Crossings (ERX) - NYC & MTA	WB Link	33,584	34,983	1,399	4%	44%	41%	-3%
** Tolled Bridges & Tunnels **	EB Link	41,949	49,809	7,860	19%	56%	59%	3%
	Total	75,533	84,792	9,259	12%	100%	100%	
East River Crossings (ERX) - NYC & MTA	WB Link	85,131	56,775	-28,356	-33%	44%	37%	-8%
** All Bridges & Tunnels **	EB Link	106,310	96,971	-9,339	-9%	56%	63%	8%
	Total	191,441	153,746	-37,695	-20%	100%	100%	

2. East River Sector with Verrazano Narrows Bridge

East River Crossings (ERX) - NYC & MTA	WB Link	51,547	21,792	-29,755	-58%	44%	32%	-13%
** Free Bridges **	EB Link	64,361	47,162	-17,199	-27%	56%	68%	13%
	Total	115,908	68,955	-46,953	-41%	100%	100%	
East River Crossings (ERX) - NYC & MTA	WB Link	55,003	54,586	-417	-1%	46%	46%	0%
with Verrazano Narrows Bridge	EB Link	65,100	64,534	-566	-1%	54%	54%	0%
** Tolled Bridges & Tunnels **	Total	120,103	119,119	-984	-1%	100%	100%	
East River Crossings (ERX) - NYC & MTA	WB Link	106,550	76,378	-30,172	-28%	45%	41%	-5%
with Verrazano Narrows Bridge	EB Link	129,461	111,696	-17,765	-14%	55%	59%	5%
** All Bridges & Tunnels **	Total	236,011	188,074	-47,937	-20%	100%	100%	

BPM - 2002 Update and Stage 2 Re-Calibration

**APPENDIX D: Exhibit D-5
PANYNJ Crossings Volumes - by Vehicle Type**

Average October 2002 Eastbound Counts - PANYNJ

BPM 2002 Model - Eastbound Flows

BPM RC-55G-5C 050129

GWB	Autos	Trucks	Buses	All	SOV+HOV	Vans	Autos	Trucks	Buses	All
AM (6-10 am)	38,397	3,544	441	42,382	38,073	1,969	40,042	2,349	83	42,474
MD	37,022	4,310	522	41,854	36,240	2,067	38,307	2,567	87	40,960
PM (4-8 pm)	33,484	1,693	504	35,681	24,224	707	24,931	1,001	39	25,970
NT	<u>24,013</u>	<u>5,620</u>	<u>291</u>	<u>29,924</u>	<u>21,221</u>	<u>714</u>	<u>21,935</u>	<u>2,072</u>	<u>6</u>	<u>24,013</u>
	132,916	15,167	1,758	149,841	119,757	5,456	125,214	7,990	215	133,418
LT	Autos	Trucks	Buses	All	SOV+HOV	Vans	Autos	Trucks	Buses	All
AM (6-10 am)	14,705	1,334	2,468	18,507	18,694	379	19,073	277	108	19,458
MD	15,389	1,062	1,489	17,940	21,477	454	21,931	357	12	22,300
PM (4-8 pm)	7,618	255	1,624	9,497	7,409	163	7,572	162	94	7,828
NT	<u>10,718</u>	<u>1,187</u>	<u>788</u>	<u>12,693</u>	<u>13,908</u>	<u>181</u>	<u>14,090</u>	<u>252</u>	<u>6</u>	<u>14,348</u>
	48,430	3,838	6,369	58,637	61,488	1,178	62,666	1,048	220	63,934
HT	Autos	Trucks	Buses	All	SOV+HOV	Vans	Autos	Trucks	Buses	All
AM (6-10 am)	8,698	596	255	9,549	11,571	249	11,821	215	167	12,202
MD	12,554	519	174	13,247	12,802	301	13,104	246	40	13,390
PM (4-8 pm)	10,656	171	200	11,027	5,291	81	5,372	69	4	5,445
NT	<u>10,996</u>	<u>453</u>	<u>92</u>	<u>11,541</u>	<u>7,325</u>	<u>104</u>	<u>7,429</u>	<u>132</u>	<u>4</u>	<u>7,565</u>
	42,904	1,739	721	45,364	36,989	735	37,724	662	215	38,601
Goethals	Autos	Trucks	Buses	All	SOV+HOV	Vans	Autos	Trucks	Buses	All
AM (6-10 am)	6,276	1,357	96	7,729	9,862	675	10,537	1,114	0	11,651
MD	9,870	1,696	97	11,663	11,575	740	12,315	1,385	0	13,700
PM (4-8 pm)	10,306	559	166	11,031	9,365	252	9,616	591	0	10,208
NT	<u>8,083</u>	<u>1,498</u>	<u>71</u>	<u>9,652</u>	<u>8,998</u>	<u>302</u>	<u>9,300</u>	<u>1,017</u>	<u>0</u>	<u>10,317</u>
	34,535	5,110	430	40,075	39,799	1,968	41,768	4,108	0	45,876
Outerbridge	Autos	Trucks	Buses	All	SOV+HOV	Vans	Autos	Trucks	Buses	All
AM (6-10 am)	9,548	733	30	10,311	12,254	568	12,822	996	0	13,818
MD	10,240	858	41	11,139	10,036	615	10,651	856	0	11,508
PM (4-8 pm)	9,383	315	76	9,774	5,886	185	6,071	270	0	6,340
NT	<u>5,881</u>	<u>761</u>	<u>46</u>	<u>6,688</u>	<u>4,635</u>	<u>201</u>	<u>4,836</u>	<u>399</u>	<u>0</u>	<u>5,235</u>
	35,052	2,667	193	37,912	32,812	1,569	34,380	2,521	0	36,901
Bayonne	Autos	Trucks	Buses	All	SOV+HOV	Vans	Autos	Trucks	Buses	All
AM (6-10 am)	1,513	401	49	1,963	1,927	97	2,025	188	0	2,213
MD	2,661	510	18	3,189	5,161	140	5,302	331	0	5,632
PM (4-8 pm)	4,247	161	26	4,434	6,932	62	6,994	138	0	7,132
NT	<u>1,798</u>	<u>223</u>	<u>11</u>	<u>2,032</u>	<u>1,779</u>	<u>25</u>	<u>1,804</u>	<u>71</u>	<u>0</u>	<u>1,875</u>
	10,219	1,295	104	11,618	15,800	324	16,124	728	0	16,852

**APPENDIX E: NYMTC BPM MODEL – UPDATED YEAR 2003 TRANSIT
NETWORK – RAIL AND FERRY SERVICES**

To Mr. Robert Donnelly
PB Consult

Date September 5, 2003

From Jeffrey Roux
Senior Consultant

Ref o:\nymtc\memos\rd090503.doc

cc William Woodford

NYMTC BPM Model – Updated Year 2003 Transit Network – Rail and Ferry Services

Enclosed with this memorandum is a CD-ROM containing the year 2003 transit network for use with NYMTC Best Practices Model (BPM). The transit network contained on the enclosed CD-ROM has updated the 1997 base-year network, named BS97v01, with year 2003 fixed-guideway/ferry transit services. The enclosed network has been named BS03v01.

Below is a synopsis of each of the updated transit services:

Long Island Rail Road

The BS03v01 Long Island Rail Road (LIRR) network coding was derived from LIRR schedules effective on May 19, 2003. The BS03v01 network updates the BS97v01 (1997) base-year network with the minor LIRR service plan changes occurring between 1997 and 2003. Exhibit A contains a coding key to the LIRR services coded in the BS03v01 network. Exhibit A contains the following tables:

- Exhibit A-1 - LIRR Inbound Port Washington Branch Service
- Exhibit A-2 - LIRR Outbound Port Washington Branch Service
- Exhibit A-3 - LIRR Inbound Hempstead Branch Service
- Exhibit A-4 - LIRR Outbound Hempstead Branch Service
- Exhibit A-5 - LIRR Inbound Far Rockaway Branch Service
- Exhibit A-6 - LIRR Outbound Far Rockaway Branch Service
- Exhibit A-7 - LIRR Inbound Long Beach Branch Service
- Exhibit A-8 - LIRR Outbound Long Beach Branch Service
- Exhibit A-9 - LIRR Inbound West Hempstead Branch Service
- Exhibit A-10 - LIRR Outbound West Hempstead Branch Service
- Exhibit A-11 - LIRR Inbound Babylon Branch Service
- Exhibit A-12 - LIRR Outbound Babylon Branch Service
- Exhibit A-13 - LIRR Inbound Montauk Branch Service
- Exhibit A-14 - LIRR Outbound Montauk Branch Service
- Exhibit A-15 - LIRR Inbound Oyster Bay Branch Service

- Exhibit A-16 - LIRR Outbound Oyster Bay Branch Service
- Exhibit A-17 - LIRR Inbound Ronkonkoma Branch Service
- Exhibit A-18 - LIRR Outbound Ronkonkoma Branch Service
- Exhibit A-19 - LIRR Inbound Port Jefferson Branch Service
- Exhibit A-20 - LIRR Outbound Port Jefferson Branch Service

Metro-North Railroad

The BS03v01 Metro-North Railroad (MNR) network coding was derived from MNR schedules effective on April 27, 2003. The BS03v01 network updates the BS97v01 (1997) base-year MNR network with the MNR service plan changes occurring between 1997 and 2003. In addition to minor service plan changes, the BS03v01 network includes the following service enhancements for MNR:

- Extension of the Harlem Line to Wassaic (with intermediate station stop at Tenmile River)
- Extension of the New Haven Line to New Haven State Street.

Exhibit B contains a coding key to the MNR services coded in the BS03v01 network. Exhibit B contains the following tables:

- Exhibit B-1 - MNR Inbound Hudson Line Service
- Exhibit B-2 - MNR Outbound Hudson Line Service
- Exhibit B-3 - MNR Inbound Harlem Line Service
- Exhibit B-4 - MNR Outbound Harlem Line Service
- Exhibit B-5 - MNR Inbound New Haven Line Service
- Exhibit B-6 - MNR Outbound New Haven Line Service

New Jersey Transit Commuter Railroad

The BS03v01 New Jersey Transit Commuter Railroad (NJT) network coding was derived from NJT schedules effective on April 27, 2003. The BS03v01 network updates the BS97v01 (1997) base-year NJT network with the NJT service plan changes occurring between 1997 and 2003. In addition to minor service plan changes, the BS03v01 network includes the following service enhancements for NJT commuter rail service:

- Construction of Hamilton station along the Northeast Corridor Line in Mercer County
- Construction of Union Township station along the Raritan Valley Line in Union County
- Construction of Newark International Airport station along the Northeast Corridor Line in Essex County

Exhibit C contains a coding key to the NJT Commuter Rail services coded in the BS03v01 network.
Exhibit C contains the following tables:

- Exhibit C-1 – NJ Transit Inbound Montclair-Boonton Line Service
- Exhibit C-2 – NJ Transit Outbound Montclair-Boonton Line Service
- Exhibit C-3 – NJ Transit Inbound Main/Bergen Line Service
- Exhibit C-4 – NJ Transit Outbound Main/Bergen Line Service
- Exhibit C-5 – NJ Transit Inbound North Jersey Coast Line Service
- Exhibit C-6 – NJ Transit Outbound North Jersey Coast Line Service
- Exhibit C-7 – NJ Transit Inbound Pascack Valley Line Service
- Exhibit C-8 – NJ Transit Outbound Pascack Valley Line Service
- Exhibit C-9 – NJ Transit Inbound Raritan Valley Line Service
- Exhibit C-10 – NJ Transit Outbound Raritan Valley Line Service
- Exhibit C-11 – NJ Transit Inbound Northeast Corridor Line Service
- Exhibit C-12 – NJ Transit Outbound Northeast Corridor Line Service
- Exhibit C-13 – NJ Transit Inbound Morris and Essex Line Service
- Exhibit C-14 – NJ Transit Outbound Morris and Essex Line Service

Ferry Services

The BS03v01 ferry network coding was derived from Summer, 2003 schedules obtained from the internet for the following ferry operators:

- NY Waterway
- Seastreak
- New York Fast Ferry
- New York City DOT

The BS03v01 network updates the BS97v01 (1997) base-year ferry network with the ferry service plan changes occurring between 1997 and 2003. The BS03v01 network includes a significant expansion of the ferry networks following September 11, 2001. In addition to operating changes to those ferry services operating in 1997, the following additional services were included in the BS03v01 network:

- Hoboken to Pier A
- Harborside to Pier A
- Pavonia to Pier A
- Weehawken to Pier 11
- Hoboken to Pier 11
- Colgate to Pier 11
- Port Liberte to Pier 11

- Liberty Harbor to Pier 11
- Manhattan East Side Ferry Shuttle
- Weehawken to Battery Park City
- Hoboken North to West 38th Street
- Colgate to West 38th Street
- Pavonia to West 38th Street
- Belford Ferry (Monmouth County) to Pier 11
- Haverstraw to Ossining Ferry
- South Amboy to Wall Street

New York City Transit Subway Service

The BS03v01 New York City Transit Subway peak period network coding was derived from New York City Transit's 2002 subway network. Off-peak transit services were coded from schedules obtained from the internet during the Summer of 2003. In addition to minor service changes, the following key operating changes have been included in the BS03v01 networks:

- Queens Boulevard connection to 63rd Street Tunnel. This connection reroutes the F-train from the 53rd Street Tunnel to the 63rd Street Tunnel.
- Introduction of V-train service. The service operates as a Queens Boulevard local service originating at Forest Hills – 71st Ave, running through the 53rd Street Tunnel and operates along 6th Avenue to its southern terminal at 2nd Avenue.
- Cortlandt Street #1/9 station has been removed from the network.

PATH Service

The BS03v01 PATH network coding was derived from PATH schedules effective, October 27, 2002. In addition to minor service changes, the following key operating changes have been implemented in the BS03v01 networks:

- The World Trade Center and Exchange Place station have been removed from the network.
- Newark to World Trade Center service has been replaced with Newark to 33rd Street service.

Hudson-Bergen LRT Service

The BS03v01 network includes coding of the Hudson-Bergen LRT service currently in operation. This service was derived from Hudson-Bergen LRT schedules effective, September 29, 2002. This service plan includes the following two services:



- West Side Avenue to Hoboken
- E. 34th Street Bayonne to Hoboken

In addition to coding the physical services, AECOM Consult also coded Hudson-Bergen LRT park-and-ride connections based upon NJ Transit's North Jersey Travel Demand Forecasting Model (NJTDFM). This coding of the Hudson-Bergen LRT line attributes was included in the BS03v01NCS.csv file (Newark City Subway).

Treatment of Fares

Our understanding of current BPM modeling practice is that original model calibration occurred with 1997 fares. As a result, the BS03v01 network was coded with the same fares as the 1997 base year network (BS97v01) network.

Updates to Transit Model Programs and GISDK Scripts

Also included on the transmitted CD-ROM are updates to three model control programs. These updates will detect the instance where a station location is coded outside of TAZ zone. The following programs should replace the existing programs in the following directories:

- runtrnmodel.rsc – \tcwutils\utils – directory
- tran_con.exe - \tcwutils\programs
- tcwctl.exe - \tcwutils\tcwctl

* * * * *

If you have any questions concerning this memorandum or the attached 2003 transit networks, please feel free to contact me at 703-645-6848.